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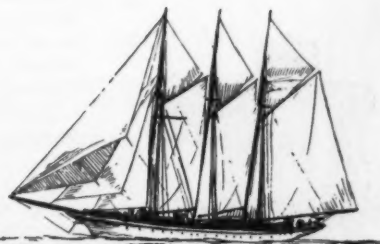
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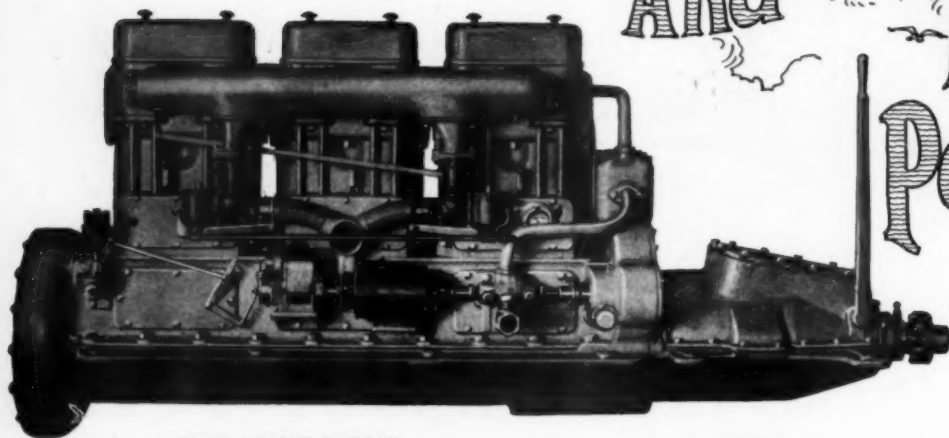
TODD SHIPYARDS CORPORATION

Plant of Tebo Yacht Basin Co.

Foot of 23rd Street, Brooklyn, N. Y.

Shipbuilders and Repairers
Engineers—Boiler Makers
Diesel Engines and Diesel Engine
Installation—Parsons Turbines
Oil Burning Equipment
Electric Drive Installations





And now a
High-
Powered

BRIEF SPECIFICATIONS

6 cylinders, $5\frac{1}{4}$ " bore, 7" stroke, cylinders cast in pairs with removable heads containing overhead valves, one intake and one exhaust for each cylinder. Valve seats completely water jacketed. Valve operating mechanism mounted on top of cylinder heads and completely encased in oil tight enclosures of cast aluminum. Seven bearing crankshaft $2\frac{1}{4}$ " diameter, hammer forged and heat treated. Seven bearing camshaft $1\frac{1}{4}$ " diameter. Engine built either with aluminum or iron base and crank chamber. Weight in aluminum 2050 lbs. in iron 2675 lbs. All bearings removable bronze backed, babbitt lined type. Bearing caps of manganese bronze. Connecting rods drop forgings of steel, heat treated, bronze bushed at upper end on piston pin $1\frac{1}{4}$ " diameter. Crank pin bearing $2\frac{1}{4}$ " diameter, $2\frac{3}{4}$ " long. Fly wheel and all moving parts enclosed. Lubricating system, full pressure type throughout of dry sump system with double oil pump and separate service tank, also water jacketed oil cooler. Two $1\frac{1}{4}$ " Stromberg carburetors with safety drip pans fitted. Rotary oil pump for vacuum fuel supply system. Water jacketed intake manifold. Ignition, either double with separate magneto and battery ignition or dual two-spark magneto, as preferred. Clutch and reverse gear of multiple disc and planetary type internally lubricated by oil under pressure passing through the hollow crankshaft. Cooling by gear type pump delivering water first through oil cooler, then to water jacket of exhaust manifold, then to cylinder jackets and finally through hot water jacket surrounding gas intake manifold. Electric starter, generator and storage battery included in regular equipment. Large crank case panels and complete easy accessibility.

Buffalo

A Conservative High-Speed Engine

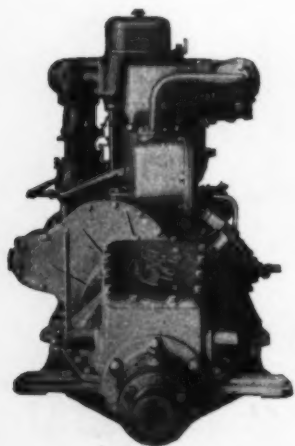
Bridging the gap between the recognized superior reliability, durability and economy of the slow speed, heavy duty type, and the compactness, smoothness, greater H. P. with less weight, high propeller speed, etc., of the prevailing "high speed" engines—combining the virtues of both and being free of the ailments of either—this latest Buffalo stands in a class by itself as the quintessence of marine engine refinement and efficiency.

Nothing freakish—nothing experimental—just a combination of modern accepted engine refinement and thirty years knowing how to build really worth while engines. Not an untried new model but an engine thoroughly tested under adverse conditions in actual service for the entire 1923 boating season and now offered with the proud confidence that it will still further enhance the Buffalo Reputation.

For the express cruiser, the large fast runabout, the day cruiser, the fast passenger boat, or wherever maximum power and reasonable weight, together with absolute reliability and durability are the considerations, this new Buffalo is the logical answer to the power question.

Our limited 1924 production of this model is being rapidly taken up by those who had advance information, but reasonable deliveries are still obtainable.

Just say so and we will gladly send complete descriptive bulletin. Tell us about the boat in connection with which you are considering it.



BUFFALO GASOLINE MOTOR COMPANY
1274-1286 NIAGARA STREET
BUFFALO, NEW YORK

"The Engine of Constant Service"

THE TRUE YARN OF A HEROIC PARAGON

WHEN a Paragon has a record of 15 years' hard service behind it, and still going strong—its owner has a right to be enthusiastic about it. But when it saved his life, his boat and the lives of three brothers—well, here's the story.

Back in 1908 someone—it's been so long ago they've forgotten who—installed a Paragon Reverse Gear in a sailboat with an auxiliary engine. After thirteen years the engine wore out from hard work—but the Paragon didn't. In fact the gear was so good they used it again with the new engine.

In the fall of 1922 the owner went out on a fishing trip with his two brothers and was caught in a bad storm that blew them helplessly towards rocky shoals. They saw themselves being rushed head on at the rocks, too late to turn around and sail away. Only one thing to do—back away—if the gear could stand the strain.

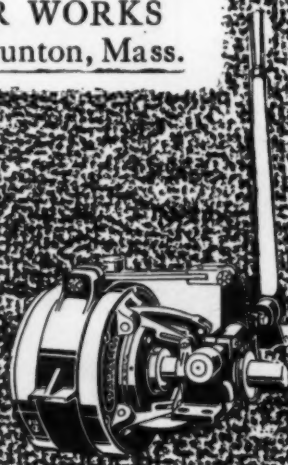
Did the fifteen year old Paragon do it? Its owner, Mr. C. F. Burks of Toledo, Ohio, wrote us of the experience. Told us of his joy when he felt the first sure grip of the veteran Paragon. How it jerked the boat up from its crazy lunge, bucked away from danger against the howling wind and sea and reversed them from disaster.

Such a dangerous experience as this may never fall to you, but wherever you go with your Paragon you have the comfortable feeling that working quietly and smoothly under the floor is a gear that can be called upon for reliable action in danger—even to saving lives.

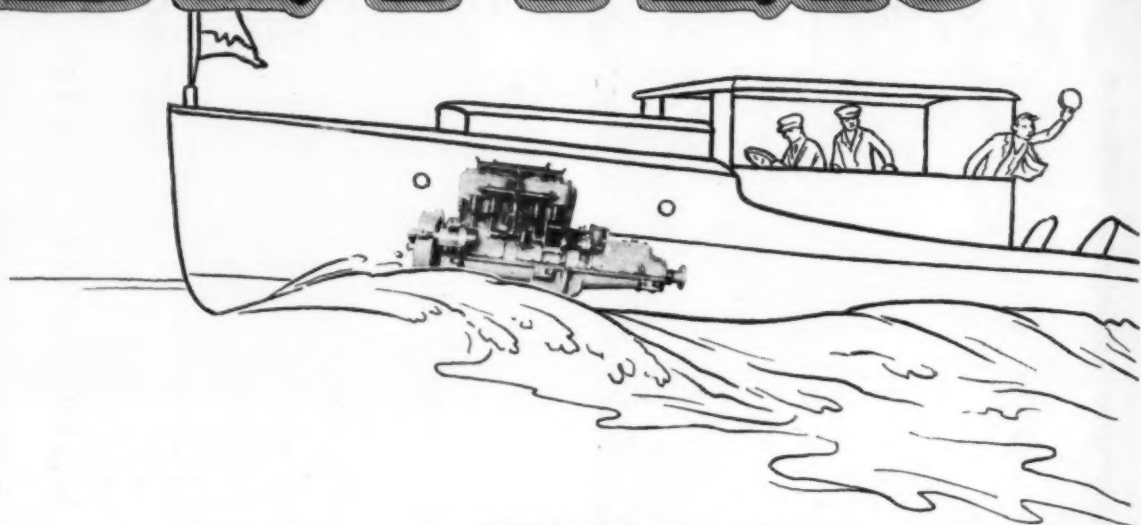
Paragons are built in three different types—the Yoke Type, popular with engine builders and for installation on extended base motors—the Enclosed Type, a self-lubricating enclosed gear running in an oil bath—and the Unit Type, the most compact and the most easily installed gear on the market. Send for circular giving order directions and prices.

PARAGON GEAR WORKS
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PARAGON REVERSE GEARS



BETTER—

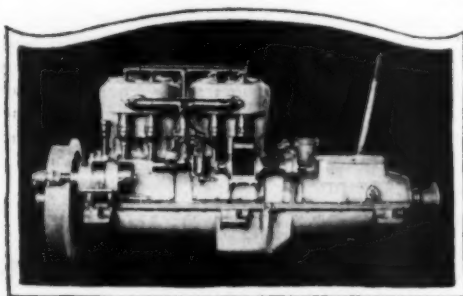


"A-M"

Bore, 4½ in., stroke 5½ in., no. of cylinders, 4, piston displacement 390 cu. in. H. P., 52 at 800 R.P.M., 40 at 1000 R.P.M., 18 at 1200 R.P.M., 54 at 1400 R.P.M.

Paragon reverse gear, Bosch high tension magneto with impulse coupling, Leece-Neville 12-volt electric starter and generator, Propeller shaft coupling for 1½-inch shaft, Bronze water circulating pump, gear type, Waterproof spark plug, Stromberg carburetor, Wiring, Oil pressure gauge.

Price, \$1050.00



Model "A M"

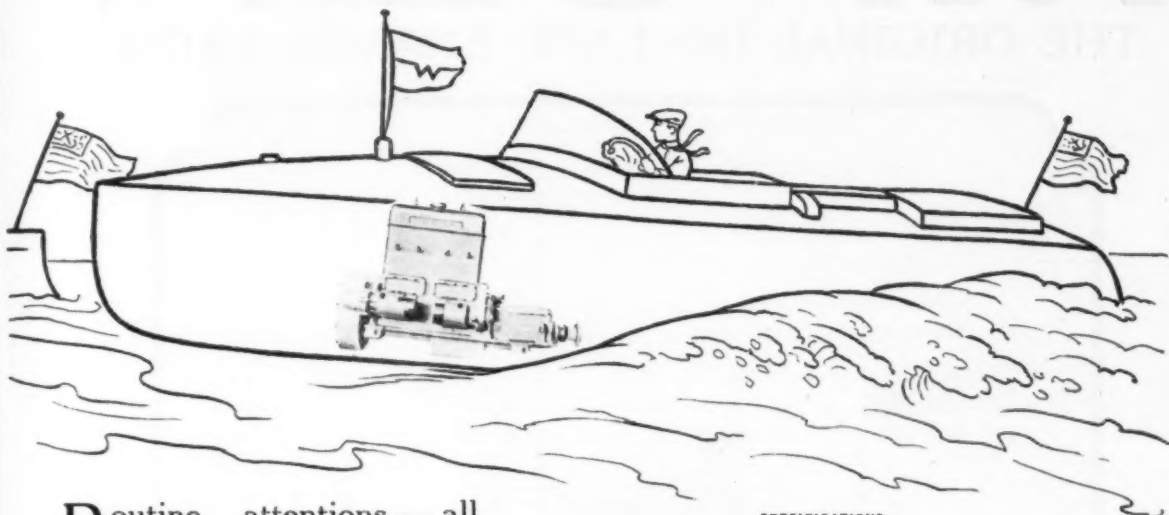
Whether your boat is a water-play-thing, a floating home, or a business partner, there's a Wisconsin White Cap to power it—better!

That White Cap will give you more power, higher speed, greater all-around satisfaction (no tinkering!)

There's a real thrill awaiting you at the wheel of a boat that's White Cap-powered. She'll loaf along, sweet and quiet, or at your whim, roar full-throated at open throttle, and whirl the miles away in her wake! Through her whole range, you'll find her smooth as silk — and as sure-powered as a liner!

WISCONSIN WHITE

in ANY BOAT



Routine attentions — all your White Cap will ever ask of you — have been made so simple and easy you'll really enjoy them.

You'll sense at once the engineer's regard for your convenience — White Cap is accessible, everywhere!

Oil strainer, oil pump, reverse gear, thrust bearings, and all accessories, can be reached without disturbing other units.

Write for illustrated literature. State length, beam, draft and type of your boat.

WISCONSIN MOTOR MFG. CO.
MILWAUKEE, WIS.

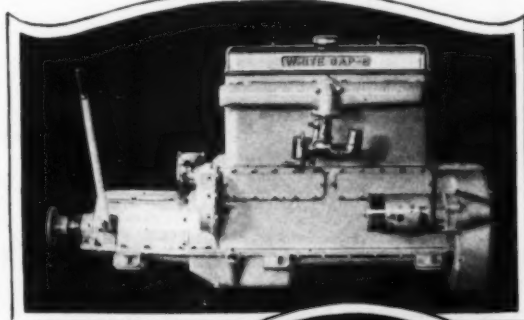
SPECIFICATIONS

White Cap "4" — Bore 4", Stroke 5", piston displacement 251.2 cu. in. H.P., 25 at 850 R.P.M., 31 at 1000 R.P.M., 38 at 1200 R.P.M., 42 at 1400 R.P.M.

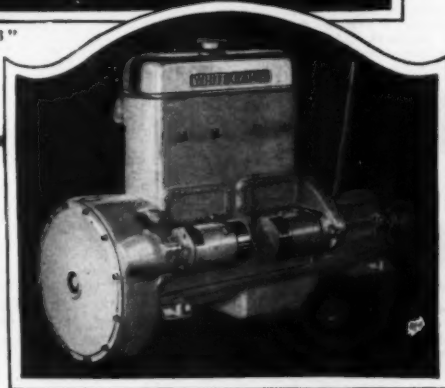
White Cap "6" — Bore 5 3/4", stroke 5", piston displacement, 268.3 cu. in. H.P., 32 at 1000 R.P.M., 43 at 1400 R.P.M., 53 at 1800 R.P.M. and 60 at 2050 R.P.M.

Both "4" and "6" Have: Paragon reverse gear, Bosch high tension magneto with impulse coupling, Leece-Neville 12 volt electric starter and generator, Propeller shaft coupling for 1 1/2 inch shaft, Bronze water circulating pump, gear type, Waterproof spark plugs, Stromberg carburetor, Wiring, Oil pressure gauge, Thermostatic water temperature control.

Prices: White Cap "4" — \$795 White Cap "6" — \$995



White Cap "6"



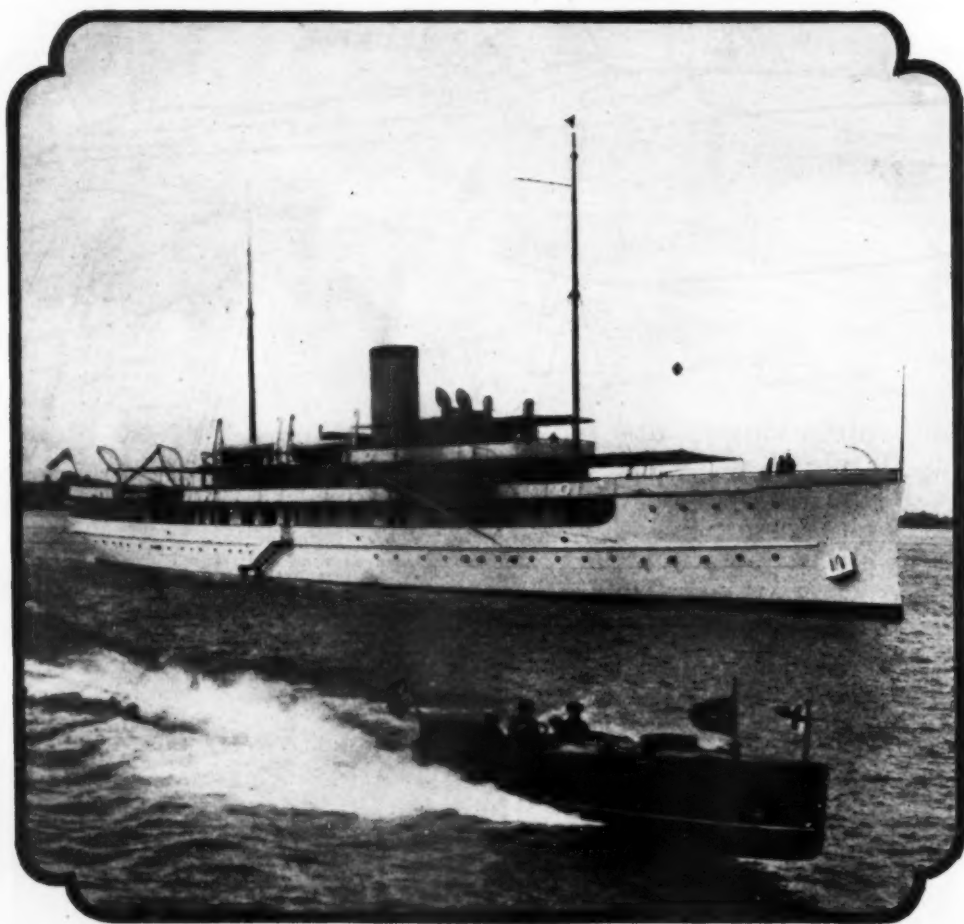
White Cap "4"

CAP

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THE ORIGINAL HOLLAND ENAMEL PAINT



"Delphine," designed by H. J. Gielow, Inc., built by Great Lakes Engineering Works

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A boat that is worth painting at all is worth painting well. Ripolin Enamel Paint is not only beautiful in appearance but in addition it will stand rough usage without deterioration. Give your craft the distinction of this wonderful finish. Furnished in gloss, semi-gloss and flat.

Write us for detailed information.

THE GLIDDEN CO.

NATIONAL HEADQUARTERS, CLEVELAND, OHIO

Advertising Index will be found on page 138



Every Package of Ripolin Enamel is sealed before it leaves the factory.

Branches in Principal Cities

A THING OF BEAUTY



EXHIBITION of the Dodge Watercar in 15 principal cities of the United States brought conclusive proof of two important facts—

1. The Watercar is a thing of beauty which attracts people of every class and station.
2. The price of the Watercar — \$2250 F. O. B. Detroit—never fails to elicit expressions of wonderment.

To those who are familiar with the principles of good boat building, it is also apparent that this 22-foot speedster is built in a most exceptional way.

The Watercar is sold exclusively by Dodge Brothers dealers. Hundreds of these dealers who examined the boat at New York, Chicago and San Francisco, expressed the belief that they could sell the entire year's production in a month or two. Therefore, if you are interested in delivery in time for use this summer, write us today—or see your local Dodge Brothers dealer.

HORACE E. DODGE BOAT WORKS, INC.
2670 Atwater Street
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"Wilgold" With Packard Gold Cup Engine Wins Gentlemen's Runabout Races at Miami and Havana

Over and over again this great Packard 6 cylinder engine demonstrates its leadership.

40 feet in length, with speed capacity up to 50 miles per hour, and for light cabin cruisers.

Twice winner of the Gold Cup races; a remarkable run in the Sweep-stakes races; the world's record run of 1064 miles in 24 hours, and then these great races at Miami and Havana.

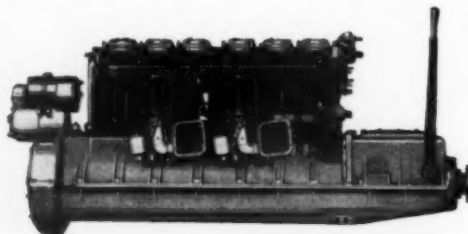
Dependable beyond any comparison with any other engine of its type; light in weight; compact and easily accessible; flexible as an automobile and the fastest engine of its size in the world.

Designed and built by Packard especially for runabouts 25 to


Write for full details.
Special terms to Builders and Dealers.

5 Models of Packard Marine Engines Ranging from 45 H.P. to 400 H.P.

PACKARD MOTOR CAR COMPANY, DETROIT




PACKARD
1M-618
Famous Gold Cup
Model
6 cylinders—
weight 900 lbs.,
200 H.P. Price
\$5000.



"Wilgold"

A classy all mahogany Runabout 25'11"x5'6"—designed and built by John L. Hacker, Detroit, the creator of the famous Rainbow III.

Wilgold and Rainbow III are powered with Packard 1M-618 Marine Engine—famous for speed and durability.



PACKARD MARINE ENGINES

Advertising Index will be found on page 158

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standing use Tobin Bronze
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under-water parts.

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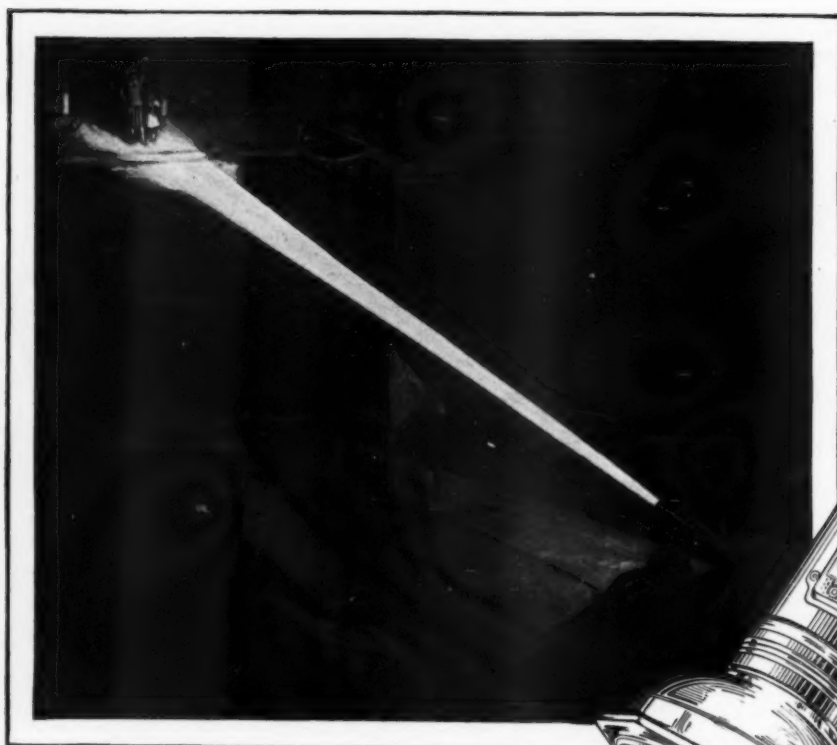
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No. 2644 Eveready
Focusing Searchlight
with the 500-foot
range.



EVEREADY UNIT CELLS fit and improve all makes of flashlights. They come in two sizes to fit every tubular flashlight case. Know the Eveready size that fits your case. Then you can buy new Eveready Unit Cells without bothering to take your flashlight along. Eveready Unit Cells mean brighter flashlights and longer battery life.

For a safe landing — use your flashlight !

KEEN, bright light to guide you to the right dock. Keep an Eveready Flashlight handy in your boat. Safe, dependable light that is invaluable for examining the engine or gas tank at night; for signaling other boats; for searching out safe channels in unfamiliar waters.

Get your flashlight ready now for the glorious evenings this summer. Load it with Eveready Unit Cells; long-lived cartridges of brilliant light.

If you haven't a flashlight now, make sure that the one you buy has the name EVEREADY stamped on the end. EVEREADY means the highest standard of flashlight quality, and

Eveready Unit Cells give more light longer.

Buy them from marine supply, electrical or hardware dealers, drug, sporting goods or general stores, garages and auto accessory shops.

Prices from 65c to \$4.50 complete with battery—anywhere in the U.S.A.

NATIONAL CARBON COMPANY, INC.

New York San Francisco

Canadian National Carbon Co., Limited

Factory and Offices: Toronto, Ontario

EVEREADY
FLASHLIGHTS
& BATTERIES
 —they last longer

ANOTHER BIG FEATURE FOR MOTOR BOATING

LAST fall Alfred F. Loomis dropped in and announced casually that he was getting set for a cruise in English waters—an unambitious cruise he said, but one that ought to be interesting because every condition of cruising in England, from tide to traffic, was different from anything he had encountered in the Caribbean.

When Capt. Loomis started out to Panama in his Hippocampus in 1921 he was a motor boatman who had never before sailed an auxiliary, and he made discoveries and mistakes—and his readers laughed with him at both. If he will now discover the British Isles with the same open mind, as if they had never been discovered, we can promise our readers the best series of cruise stories since *The Cruise of the Hippocampus*.

The boat for the English cruise is chartered. She is a 37-foot canoe-stern yawl, powered with a four-cylinder sleeve motor. She is manned by one paid hand and is lying at the Isle of Wight. Mrs. Loomis, who proved her ability as a yachtsman in the second cruise of the Hippo, will be co-navigator, co-pilot, and co-captain. The Loomises leave America this month and start their English cruise in mid-June. The first article by Mr. Loomis is scheduled for the August number. Watch for it.

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If we were asked to name the three greatest yacht clubs in the country, from the point of view of great yachting accomplishments, in recent years, we would reply without the slightest hesitancy: the Chicago Yacht Club, the Detroit Yacht Club and the Havana Yacht Club.

Without question, the one person responsible for putting the Chicago Yacht Club into its present prominent position is Commodore Sheldon Clark who has just retired after three terms at the helm. To show their appreciation of Commodore Clark's work, the Chicago Yacht Club has recently created a permanent trophy to be known as the Commodore Sheldon Clark trophy. This will remain in their Club forever as a token of affection and gratitude to the Commodore for the splendid services he rendered the Club and that future generations might know that the man most largely responsible for the great growth and success of the Chicago Yacht Club was Sheldon Clark.

MoToR BoatinG is published monthly by the International Magazine Company, William Randolph Hearst, president; C. H. Hathaway, vice-president; Ray Long, vice-president; Joseph A. Moore, treasurer; C. E. Forsdick, secretary; 119 West 40th St., New York, N. Y., U. S. A. Single copies, 25 cents. Yearly subscription in the United States and Canada, \$3.00. In foreign countries, \$4.00. When you receive notice that your subscription has expired it is best to renew it at once, using the blank enclosed. When changing an address, give the old address as well as the new and allow five weeks for the first copy to reach you. Copyright, 1923. International Magazine Company. MoToR BoatinG is fully protected by copyright and nothing that appears in it may be reprinted either wholly or in part without permission.

GREAT LAKES



The Twenty-Six

Foot Runabout

\$2950

The Great Lakes Twenty-Six Foot Runabout is the ideal boat for use in connection with the Summer Home or Camp. It is powered with Model F Four Cylinder Scripps Marine Engine which gives it a speed of twenty five miles an hour. There is a two unit electric starting and lighting system. Outside of hull above water line is natural finish mahogany. Coaming, decks, cockpit and joiner work are also of mahogany. All deck fittings including cleats, chocks, ventilators, et cetera, are of polished bronze. The seat cushions are deep, comfortable, box spring cushions upholstered in a heavy blue leather cloth. The gasoline capacity is forty gallons with the tank under the after deck; the Stewart Vacuum System is used. There are two double diagonally planked water tight bulkheads with canvass between. In every respect, design, workmanship, and fittings, this runabout is ideal. The price is \$2950 at Milwaukee. Orders for spring delivery should be placed promptly.

The Great Lakes 54 Express Cruiser

The Great Lakes Fifty-Four Foot Express Cruiser combines the comforts essential for extended cruising with the requirements for fast commuting. The Fifty Four is a one man bridge-control cruiser that affords accommodations for a party of six or eight and a crew of two. Powered with twin screw engines, a speed of twenty-five miles is easily attained.

The spacious, covered bridge deck is fitted with a windshield and side curtains, affording complete protection in inclement weather. High rails are provided which are laced in with canvas. All instruments and switches are mounted on special boards. Reverse gear levers are carried up beside the wheel. The twin power plant controls are absolutely centralized for easy one-man operation, making it only necessary to carry a com-

bination captain-engineer and a combination cook and general utility man. The deck itself is of beautiful white cork pine with seams filled with a special mahogany-colored seam composition.

The self-bailing cockpit is furnished with a large box-spring leather covered seat and four wicker yacht chairs. A canopy can be furnished at extra charge. A splendid lounging place—extremely comfortable on a windy, blustery day. Just forward of the cockpit, on the after cabin, is carried one of the best designed 10-foot dinghies built.

The Fifty-Four is fully described in Bulletin A; the Twenty-Six Foot Runabout, in Bulletin B, both of which will be mailed upon request.

GREAT LAKES BOAT BUILDING CORPORATION

MILWAUKEE, WISCONSIN

New York Office: 110 E. 42nd Street

Tel. 1093 Murray Hill



Two Yachtsmen - Internationally Famous



Commodore Peter Morales and Vice Commodore Rafael Posso of the Habana Yacht Club, who were not only directly responsible for the International Motor Boat Regatta held in Havana, Cuba, during the past winter, but through their efforts the finest yacht club in the world has been built in their city, and will go into commission this month. About \$1,000,000 has been expended on the new home of the Habana Yacht Club, and it will be opened without a cent of indebtedness.

CHAP Says

HERE IS A QUESTIONNAIRE THAT IS TIMELY



HAVE YOU GOT YOUR NUMBER? IT COSTS NOTHING, BUT IT SHOULD BE OBTAINED FROM THE COLLECTOR OF CUSTOMS NEAREST YOUR HOME PORT, AND THE NUMERALS PLACED OR PAINTED ON EITHER SIDE OF YOUR BOAT'S BOW IN NUMERALS AT LEAST THREE INCHES HIGH. THIS FEDERAL REGULATION APPLIES TO ALL UNDOCUMENTED MOTOR BOATS AND AUXILIARIES EXCEPT BOATS OF LESS THAN 16-FOOT LENGTH POWERED WITH OUTBOARD MOTORS. IF YOU HAVE ALREADY OBTAINED YOUR NUMBER, YOU MAY SIT PRETTY, AS IT DOES NOT REQUIRE ANNUAL RENEWAL.



AND THEN—HAVE YOU PAID YOUR FEDERAL USER'S TAX TO THE COLLECTOR OF INTERNAL REVENUE NEAREST YOUR HOME? THIS FORMALITY MAY COME A LITTLE HARD, BUT IT IS LESS EXPENSIVE THAN A FINE. IF YOUR BOAT IS MORE THAN 32 FEET IN LENGTH AND LESS THAN 50 FEET, THE TAX IS \$1 PER FOOT; IF ITS LENGTH FALLS BETWEEN 50 AND 100 FEET, THE TAX IS \$2 PER FOOT; AND ABOVE 100 FEET IT IS \$4 PER FOOT. BUT CHEER UP. IF YOU COME UNDER THE LIMIT OF 32 FEET OR IF YOUR BOAT IS UNDER FIVE TONS NET, YOU ARE TAX-EXEMPT. IN ANY EVENT YOU HAVE UNTIL JULY FIRST TO PAY THE TAX.



AND THIS IS ALSO IMPORTANT. AT ALL TIMES WHILE A MOTOR BOAT IS UNDER WAY SHE MUST BE EQUIPPED WITH WHITE BOW LIGHT, RED AND GREEN SIDE LIGHTS, AFT WHITE LIGHT, FOG BELL, FOG HORN, WHISTLE, FIRE EXTINGUISHER, TWO COPIES OF THE PILOT RULES, A LIFE PRESERVER FOR EACH PERSON ON BOARD. EVERY ARTICLE OF THIS EQUIPMENT REDUCES THE DANGER HAZARD AFLOAT, AND MUCH OF IT VITALLY CONCERNS THE SAFETY OF EVERY SMALL BOAT THAT SHARES YOUR WATERWAYS. ALSO, THE LAW REQUIRES YOU TO CARRY THIS EQUIPMENT, AND THERE ARE NUMEROUS OFFICIALS IN UNCLE SAM'S EMPLOY WHOSE DUTY IT IS TO INSPECT YOU AND SEE THAT YOU HAVE IT. ONLY TWO EXCEPTIONS ARE PERMITTED THE LITTLE FELLOW BY LAW. IF YOUR BOAT IS LESS THAN 26 FEET IN LENGTH YOU MAY OMIT THE FOG BELL AND FOG HORN. BUT NOT IF YOU'RE WISE. EVEN IF YOU ARE ONLY USING AN OUTBOARD MOTOR YOU WILL REQUIRE THE SAME EQUIPMENT.

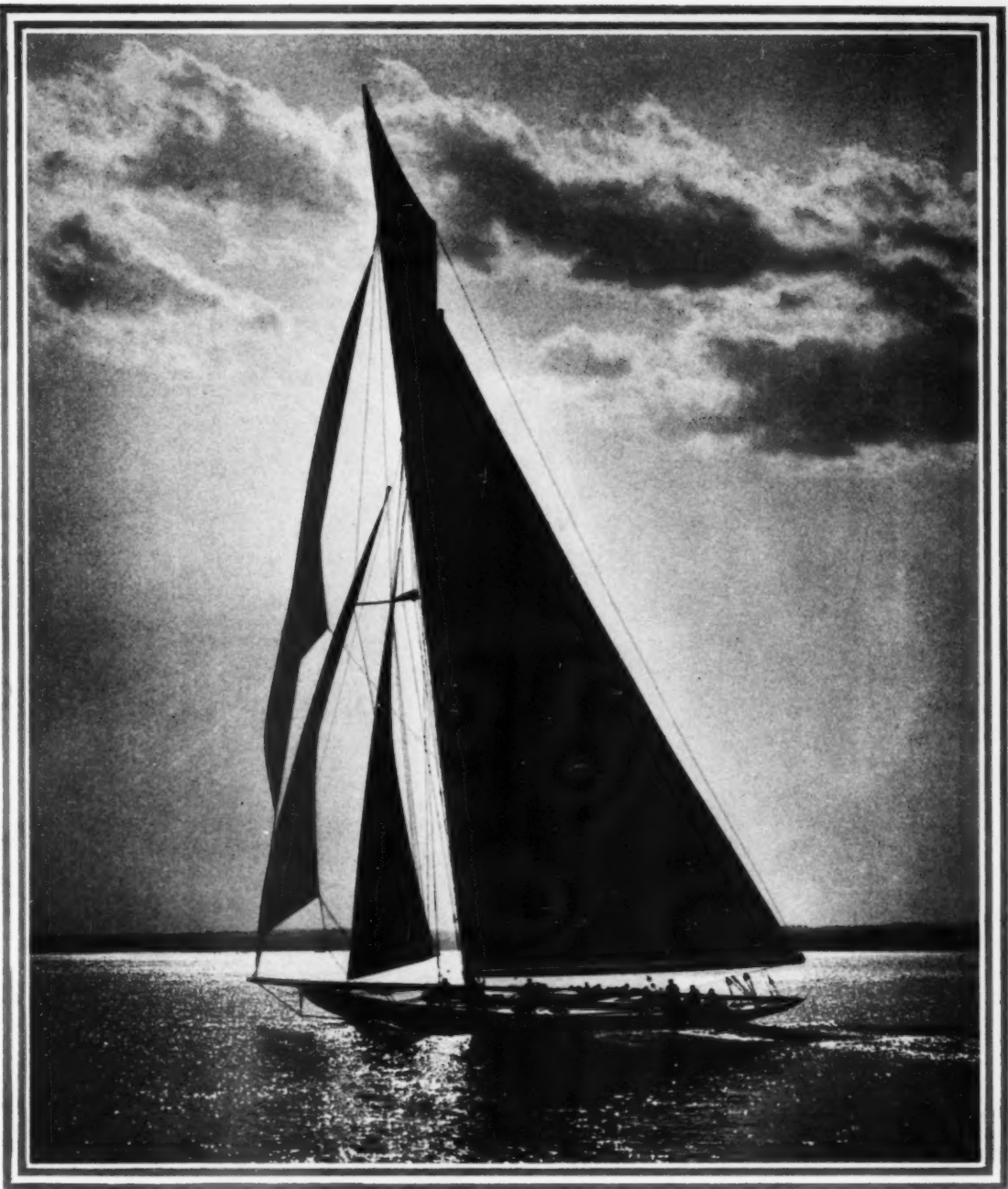


AS TO LICENSES, DOES YOUR BOAT CARRY PASSENGERS FOR HIRE? IF IT DOES, AN OPERATOR'S LICENSE IS REQUIRED AND WILL BE GIVEN WITHOUT EXAMINATION BY THE LOCAL STEAMBOAT INSPECTORS. IF YOU DO NOT CARRY PASSENGERS FOR HIRE, NO LICENSE IS NEEDED.



WHICH ENDS THE QUESTIONNAIRE. IF YOU HAVE READ IT AND WILL COMPLY WITH ALL ITS PROVISIONS, LAWS AND LAW ENFORCERS WILL PASS YOU BY THIS SUMMER.





Photograph by M. Rosenfeld

When Boreas Does The Work

The quiet easy motion of the sailing craft has an indescribable fascination for all who have ever experienced it. Slipping silently and steadily onward through quiet waters, propelled by the gentle breezes of a summer's day gives one a great respect for the majesty of nature's forces. All outdoor beckons to you with all its persuasiveness to come and be one of the happy throng who have found greater health and happiness in the greatest sport of all—Boating



Part 3

When the flotilla was within pistol shot of the schooner Mr. Gibney stepped to the rail and motioned them back. Immediately the natives ceased paddling, and a wild-looking fellow stood up in the forward canoe. "That feller'd eat a rattlesnake," gasped Captain Scraggs. "Shoot him, Gib, if he bats an eye"

*Illustrated by
ANTON OTTO FISCHER*

"WELL, Scraggsy, old hunks, this is pleasant, ain't it?" said Mr. Gibney, and spat on the deck of the Maggie II.

"Right-o," replied Captain Scraggs cheerily, "though when I was a young feller and first went to sea, it wasn't considered no pleasantry to spit on a nice clean deck. You might cut that out, Gib. It's vulgar."

"Passin' over the fact, Scraggs, that you ain't got no call to jerk me up on sea ettycat, more particular since I'm the master and managin' owner of this here schooner, I'm free to confess, Scraggsy, that your observation does

you credit. I just did that to see if you was goin' to take as big an interest in the new Maggie as you did in the old Maggie, and the fact that you object to me expectoratin' on the deck proves to me that you're leavin' behind you all them bay scow tendencies of the green-pea trade. It leads me to believe that you'll rise to high rank and distinction in the Colombian navy. Your fin, Scraggsy. Expectoratin' on the decks is barred, and the Maggie II goes under navy discipline from now on. Am I right?"

"Right as a right whale," said Captain Scraggs. "And now that you've given that old mate of mine the course,



UNDER the JOLLY ROGER

by PETER B. KYNE

THE old freighter Maggie after a period of idleness is finally put to work running a blockade with a contraband cargo. Scraggs and Gibney meet and with the aid of the contraband munitions cargo the old Maggie is led to attack a gasoline coast patrol schooner belonging to the Federal Navy of a South American Republic. By a bold front and Gibney's indomitable nerve the gunboat surrenders and our heroes find themselves in possession of a new craft.

Our old friend McGuffey is found to be engineer of the gunboat and the reunion of the three adventurers is celebrated over a kettle of grog. The schooner is rechristened Maggie II and after an overhauling and refitting sets out to sea on a new voyage of adventure.

and we've temporarily plugged up the holes in this here Mexican gunboat, and everything points to a safe and profitable voyage from now on, suppose you delegate me as a committee of one to brew a scuttle of grog, after which the syndicate holds a meetin' and lays out a course for its future conduct. There's a few questions of rank and privileges that ought to be settled once for all, so there can't be no come-back."

"The point is well taken and it is so ordered," said Mr. Gibney, who had once held office in Harbour 15, Masters and Pilots Association of America, and knew a fragment or two of parliamentary law. "Rustle up the

grog, call McGuffey up out of the engine room, and we'll hold the meetin'."

Twenty minutes later Scraggs came on deck to announce the successful concoction of a kettle of whisky punch; whereupon the three adventurers went below and sat down at the cabin table for a conference.

"I move that Gib be appointed president of the syndicate," said Captain Scraggs.

"Second the motion," rumbled McGuffey.

"The motion's carried," said Mr. Gibney, and banged the table with his horny fist. "The meetin' will please come to order. The chair hereby appoints Phineas Scraggs

secretary of the syndicate, to keep a record of this and all future meetin's of the board. I will now entertain propositions of any and all natures, and I invite the members of the board to knock the stopper out of their jaw tackle and go to it."

"I move," said Captain Scraggs, "that B. McGuffey, Esquire, be, and he is hereby appointed, chief engineer of the Maggie II at a salary not to exceed the wage schedule of the Marine Engineers' Association of the Pacific Coast, and that he be voted a one-fourth interest in the vessel and all subsequent profits."

"Second the motion," said Mr. Gibney, "and not to hamper the business of the meetin', we'll just consider that motion carried unanimously."

B. McGuffey, Esquire, rose, bowed his thanks, and sat down again, apparently very much confused. It was evident that he had something to say, but was having difficulty framing his thoughts in parliamentary language.

"Heave away, Mac," said Mr. Gibney.

"Cast off your lines, McGuffey," chirped Scraggs.

Thus encouraged, McGuffey rose, bowed his thanks once more, moistened his larynx with a gulp of the punch, and spoke:

"Feller members and brothers of the syndicate: In the management of the deck department of this new craft of

ourn, my previous knowledge of the worthy president and the unworthy secretary leads me to believe that there's goin' to be trouble. A ship divided agin herself must surely go on her beam ends. Now, Scraggsy here has been master so long that the juice of authority has sorter soaked into his marrer bones. For twenty years it's been 'Howdy do, Captain Scraggs,' 'Have a drink, Captain Scraggs,' 'Captain Scraggs this an' Captain Scraggs that.' I don't mean no offense, gentlemen, when I state that you can't teach an old dog new tricks. No man that's ever been a master makes a good mate. On the other hand, I realize that Gib here has been a-pantin' and a-bellyachin' all his life to get a ship of his own an' have folks call him 'Captain Gibney.' Now that he's gone an' done it, I say he's entitled to it. But the fact of the whole thing is, Gib's the natural leader of the expedition or whatever it's goin' to be, and he can't have his peace of mind wrecked and his plans disturbed a-chasin' sailors around the deck of the Maggie II. Gib is sorter what the feller calls the power behind the throne. He's too big a figger for the grade of captain. Therefore, I move you, gentlemen, that Adelbert P. Gibney be, and he is hereby nominated and appointed to the grade of commodore, in full command and supervision of all of the property of the syndicate. And I also move that Phineas Scraggs be appointed chief navigatin' officer of this packet, to retain his title of captain, and to be obeyed and respected as such by every man aboard with the exception of me and Gib. The present mate'll do the navigatin' while Scraggsy's learnin' the deep sea stuff."

"Second the motion," said Captain Scraggs briskly. "McGuffey, your argument does you a heap of credit. It's — it's — dog my cats, McGuffey, it's masterly. It shows a keen appreciation of an old skipper's feelin's, and if the move is agreeable to Gib, I'm willin' to hail him as commodore and fight to maintain his office. I — I dunno, Gib, what I'd do if I didn't have a mate to order around."

"Gentlemen," said Mr. Gibney, beaming, "the motion's carried unanimous. Captain — chief — your fins. Dook me. I'm honored by the handshake. Now, regarding that crew you brought down from San Francisco on the old

Maggie, Scraggs, they're a likely lot and will come in handy if times is as lively in Colombia as I figger they will be when we arrive there. Captain Scraggs, you will have your mate pipe the crew to muster and ascertain their feelin's on the subject of takin' a chance with Commodore Gibney. If they object to goin' further, we'll land 'em in Panama an' pay 'em off as agreed. If they feel like followin' the Jolly Roger we'll give 'em the coast seaman's scale for a deep-water cruise and a five per cent bonus in case we turn a big trick."

Captain Scraggs went at once on deck. Ten minutes later he returned to report that the mate and the four seamen elected to stick by the ship.

"Bully boys," said the commodore, "bully boys. I like that mate. He's a smart man and handles a gun well. While I should hesitate to take advantage of my prerogative as commodore to interfere with the normal workin's of the deck department, I trust that on this special occasion our esteemed navigatin' officer, Captain Scraggs, will not consider it beneath his dignity or an attack on his office if I suggest to him that he brew another kettle of grog for the crew."

"Second the motion," replied McGuffey.

"Carried," said Scraggs, and proceeded to heat some water.

"Anything further?" stated the president.

"How about uniforms?" This from Captain Scraggs.

"We'll leave that to Gib," suggested McGuffey. "He's been in the Colombian navy and he'll know just what to get us."

"Well, there's another thing that's got to be settled," continued Captain Scraggs. "If I'm to be navigatin' officer on the flagship of a furrin' fleet, strike me pink if I'll do any more cookin' in the galley. It's degradin'. I move that we engage some enterprisin' Oriental for that job."

"Carried," said Mr. Gibney. "Any further business?"

Once more McGuffey stood up. "Gentlemen and brothers of the syndicate," he began, "I'm satisfied that the backbitin', the scrappin', the petty jealousies and general cussedness that characterized our lives on the old Maggie will not

be duplicated on the Maggie II. Them vicious days is gone forever, I hope, an' from now on the motto of us three should be:

"All for one and one for all —
United we stand, divided we fall."

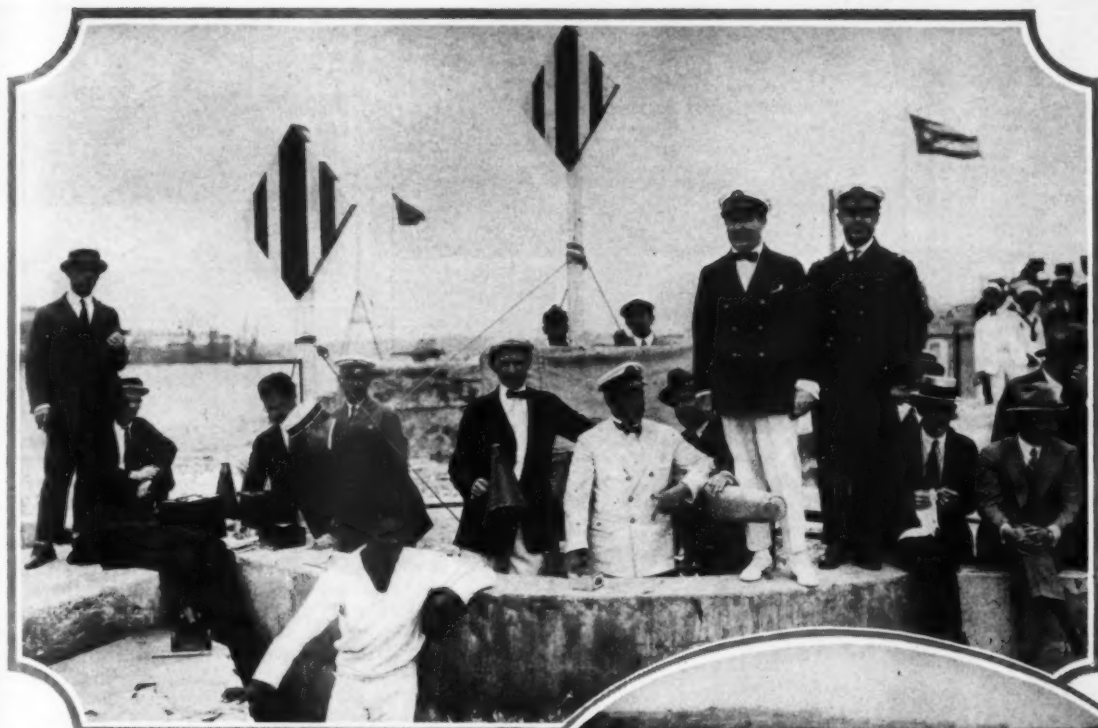
This earnest little speech, which came straight from the honest McGuffey's heart, brought the tears to the commodore's eyes. Under the inspiration of McGuffey's unselfish words the glasses were refilled and all three pledged their friendship anew. As for Captain Scraggs, he was naturally of a cold and selfish disposition, and McGuffey's toast appealed more to his brain than to his heart. Had he known what was to happen to him in the days to come and what that simple little motto was to mean in his particular case, it is doubtful if he would have tossed off his liquor as gaily as he did.

"There's one thing more that we mustn't neglect," warned Mr. Gibney before the meeting broke up. "We've got to run this little vessel into some dog-hole where there's a nice beach and smooth water, and change her name. I notice that her old name Reina Maria is screwed into her bows and across her stern in raised gilt letters, contrary to law and custom. We'll snip 'em off, sand-paper every spot where there's a letter, and repaint it;

(Continued on page 106)

TO THE SOUTH SEA ISLANDS

THE further cruise of the famous trio Gibney, Scraggs and McGuffey under the flag of the Maggie II leads them far from their familiar haunts. They are tempted to go cruising in the South Seas in search of fortune and adventure. What they find and experience on the voyage and upon their arrival is related here. Mr. Kyne has developed his story in a very clever way, and its final installment in next month's MoToR BoatinG, will be the most interesting and stirring one of the entire story. Further stories by Mr. Kyne dealing with the same three characters will follow in subsequent issues throughout the summer:—Editor.



The Race Committee. With the megaphone is J. Lee Barrett, American Chairman; at his right is Comodore Morales of the Habana Yacht Club. Comodore Posso, Regatta Chairman is standing next at the right



Mambisa, the Cuban runabout owned by A. M. Puente and powered with a Fiat engine



J. A. (Jack) Williams of Buffalo, N. Y., owner and driver of his Gold Cup Class Champion, Wilgold

Havana's First International Motor Boat Races

**Three American Craft Compete with Cuban Speedsters—
Baby Cub, Wilgold and Mary
Win Events**

By CHARLES F. CHAPMAN

W E Americans should not for a moment think that we know all that there is to know about motor boat racing. The recent regatta at Havana, Cuba, conclusively demonstrated this. While it is true that the three American boats which participated, each won their races, yet from the standpoint of hospitality, enthusiasm and spectator-interest, no races ever held in America or in fact elsewhere in the motor boat world have ever approached the perfection reached by the Cubans. Not one of the many Americans who went over to Cuba for the motor boat races there this winter will question this statement.

Cuba and Cubans are intensely interested in all forms of yachting activities; motor boating as well as sailing. The sport is only in its infancy but is growing at a tremendous rate and is bound to reach enormous proportions in the near future. This year's regatta was the first attempt, but its success fixes it as an annual event. Most of the boats now in Cuba are of American build and powered by motors manufactured in the United States. But this condition may not exist for long as a number of very fine boat-building yards are being started in Havana and the chances are that in a few years they will be able to turn out craft



Bibi, a Cuban craft, but powered with a sterling engine

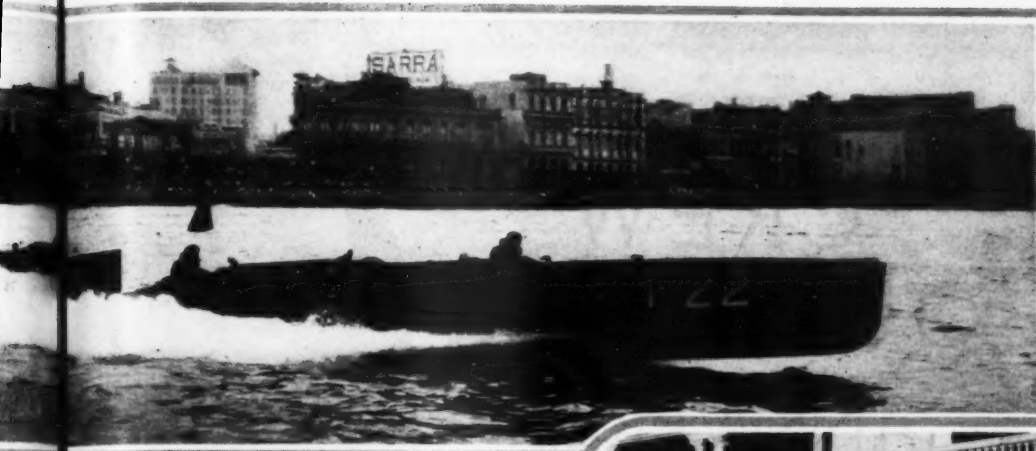
Howard Lyon of New York City, at the wheel of his baby car, Baby Cub

locally which will come up to if not surpass American standards.

Yachting in Cuba is somewhat different than in the waters of its neighbor, Florida. In Florida, the yachting season is during the winter months while at Cuba most of the craft are out of commission during this period and are only used during the period from April to November. There are several reasons for this condition. Most of the cruising in Florida is done on inland or protected waters, while in Cuba there are few places to cruise that are not part of the open ocean. Therefore when the stormy winter winds blow the Florida craft suffer no discomforts.

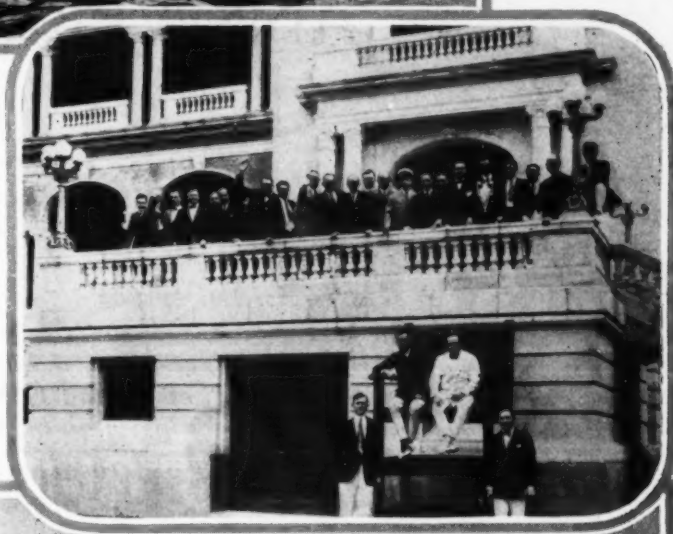


A glimpse of the crowd at Havana watching Baby Cub and Mary fight it out in the first heat of the Sweepstakes Class. The race was practically a dead heat but the judges finally awarded the heat to Howard Lyon's Baby Cub, declaring this boat had won by six inches in 20 miles. Mary took the second heat by about 10 seconds and thus won the Sweepstakes Trophy



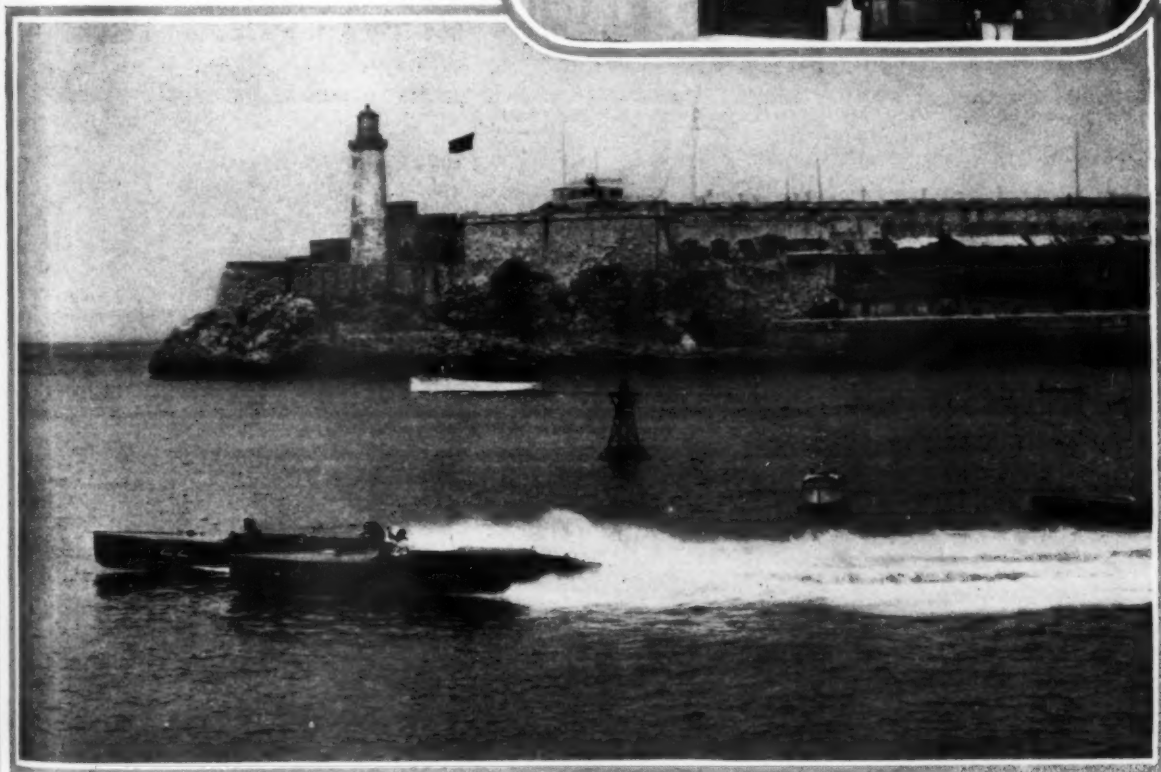
Mary, owned by Colonel Green and driven by Charles F. Chapman, Editor of MoToR Boating, winning the Sweepstakes Class at Havana. Baby Cub with Howard Lyon at the wheel is only a length astern. Note the view of Havana and crowds watching the races

The Americans, who attended the Havana races, at the new home of the Habana Yacht Club just after a luncheon tendered to them



while the weather in Cuba on unprotected waters gets so bad at times that the sport of yachting during that season loses most of its charms. It is also a fact that in Florida most of the boating is done by tourists who are in that region only during the winter months, while in Cuba the yachtsmen are all-the-year-round residents and with the perfect and beautiful weather which prevails on the Gulf during the summer months it is only natural that the natives there should take advantage of it.

In view of the conditions outlined above the yachting atmosphere which greeted us upon our arrival at Havana was not quite as intense as it was on the other side of the straits which we had left (Continued on page 96)



Start of the Sweepstakes Class at the Havana Regatta, showing the three American boats, Mary, Baby Cub, and Willgold, in action



The CREW QUESTION ANSWERED

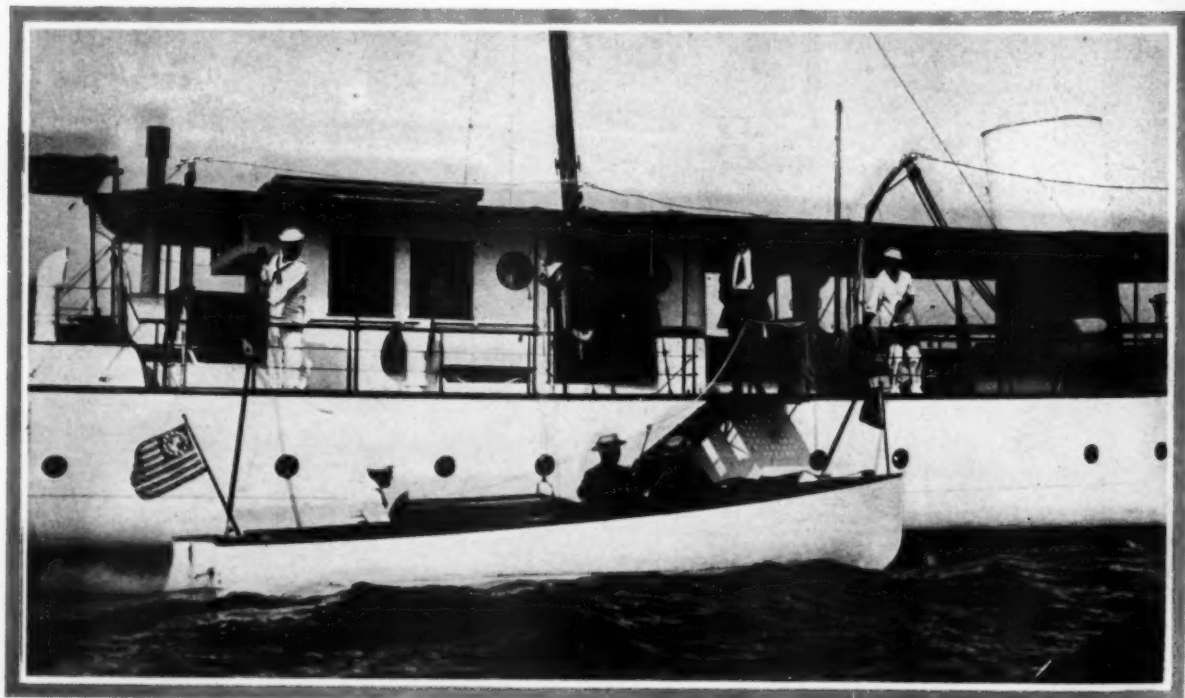
PART 2

By ALFRED F. LOOMIS

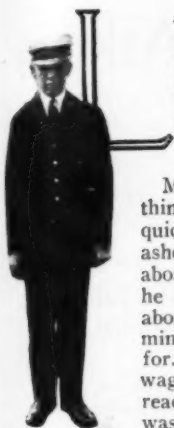
As Indicated in the Article Last Month the Problem of a Suitable Crew for the Yacht Is An All Important One. Previously Discussed Were Such Matters As, Where to Get Men, What to Pay, What Types to Select, and Other Pertinent Subjects. This Article Will Discuss the Problems of the Large Yacht Owner, the Purchase of Supplies, etc.



Photograph by M. Rosenfeld



Large pretentious craft require a large crew, deck hands, launch men, engine room force and navigating officers



AST spring a friend of mine was sitting on the deck of his yacht shortly after she went into commission. Along the shore came an individual with an English air and an English satchel who called across the water:

"I say, sir, were you thinking of 'iring a steward?"

My friend had been thinking of everything but hiring a steward. However, he is quick to embrace new ideas, and he rowed ashore, picked up the Britisher and took him aboard. It then developed that 'Awkins, as he called 'imself, had once seen my friend aboard another yacht and had made up his mind that here was a good owner to work for. He declared that he would leave the wage question to my friend, and that he was ready to start work that minute. So he was hired.

An hour later 'Awkins 'ad the galley in order and was on his way to the nearest village to buy slip covers for the bunks and flat irons for his master's clothing. He abhorred untidiness. 'Awkins would have died before letting my friend go ashore with unpolished shoes or in clothes that were not pressed. He showed him undreamed of economies in ordering supplies and serving them, and developed a surprising aptitude for handling sails and working on deck. Altogether 'Awkins was a jewel of the first water, and my friend put in his happiest season afloat.

I give this episode as an antidote to all the stories that the newcomer in yachting circles hears about the crookedness of crews in general and of cooks and stewards in particular. It is like a glimpse of the setting sun after a black day of clouds and high wind. It gives new hope to the weary heart. But, alas, it is not typical.

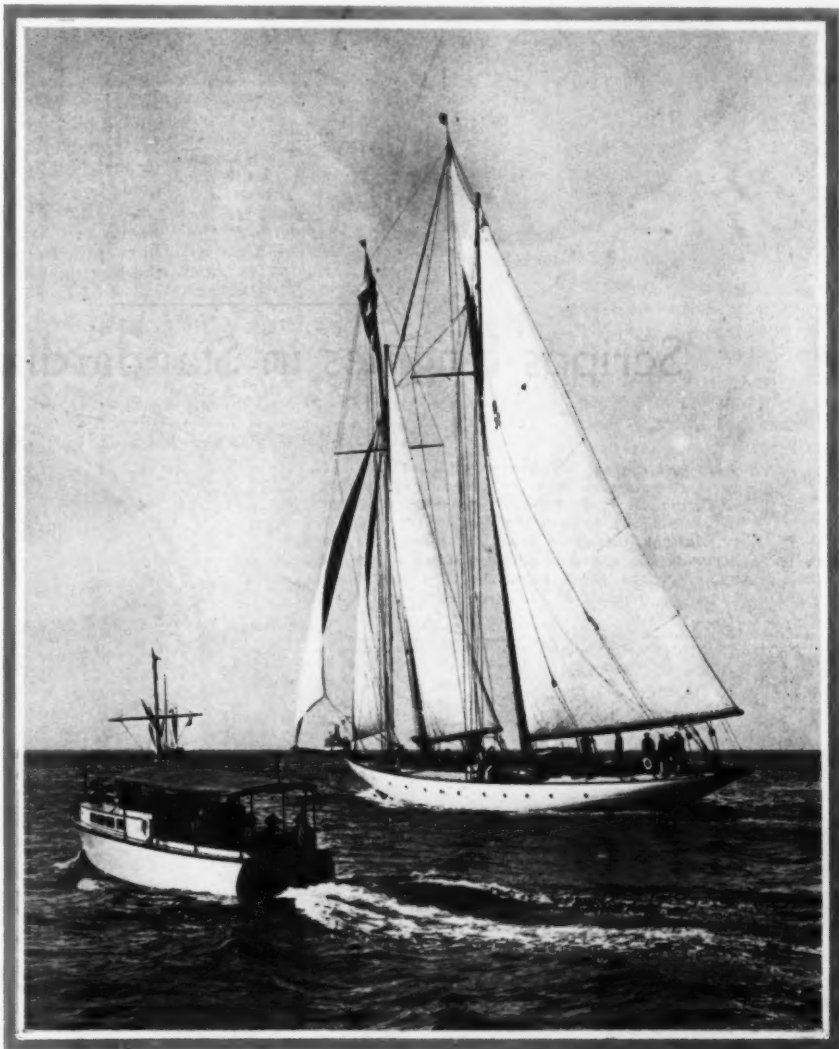
If the opinion of the twenty odd yachtsmen with whom I talked in gathering material for this article counts for anything, the average member of a crew regards his owner as his rightful pay. He considers that because bricklayers get \$20 a day he is entitled to at least that. So if a steward connives with a butcher to slip over a bill for twelve chickens when only six have been delivered, he does not consider himself dishonest. It is honest graft, and he thinks, "This bird (the owner—not one of the chickens) made his nile robbing widows and orphans. He's a dirty crook and he's got more than his share. I owe it to myself and the kiddies (don't forget the kiddies) to get what I can."

A steward of this type is fortified in his dishonest practices by knowledge that

the owner is not likely to inspect the ice chest to see how much food actually is delivered. If the owner should so lower his dignity as to snoop around the galley, the steward will be well supplied with alibis. For instance, six of the chickens were bad, and were sent back. A credit will appear on the next bill.

Now, if a yacht steward finds no wrong-doing in out-and-out cheating, it is easy to understand his attitude when he claims a commission on all supplies bought for the boat. Some owners condone this practice on the score either that the commission does not come out of their pockets, or (conceding that they are the ultimate payees) that it is the best way to keep a steward happy. Such owners do the sport of yachting an actual harm. They not only rob themselves but make it more difficult for their fellows to secure honest, self-respecting crews. What is more, the best type of yacht sailors disapprove of purchasing stores on a commission basis.

Where there is petty thievery in the purchase of supplies, there appear to be two ways of eliminating it. One is to put the cook or steward on an allowance and make him feed himself and the crew within that amount. In the old days seventy-five cents a man was ample. Today \$2 a man is more like it, and more in a region of high prices. But this allowance method has its disadvantages. It is not very pleasant for the owner, for (Continued on page 146)



The first essential for the owner of a yacht of large size is the selection of a trustworthy captain



William Atkin whose designs will be published in MoToR BoatinG beginning in June

William Atkin

To Design for

MoToR BoatinG

Complete How-to-Build-Plans of Small Boats, Both Motor and Sail, to be Featured Each Month.

FOR the past several years, MoToR BoatinG has been featuring in each issue, complete plans and descriptions of an easy-to-build motor boat. The plans, as published, have been reproduced to scale and have been so complete that anyone with a fair amount of skill with tools could build the boat himself without the assistance of a professional boat builder. Most of the plans in MoToR BoatinG have been published in the form of a large blue print, an exclusive feature of this magazine.

The plans published each month have proven very popular among our readers. Reports have reached us from all sections of the country, as well as from abroad, of craft which have been built from MoToR BoatinG plans. Many of the boats have been designed by John L. Hacker, William J. Deed, William H. Hand, Jr., Charles D. Mower and George F. Crouch, all of them specialists in their particular field.

In view of the popularity of our Build-a-Boat Series, we have decided to enlarge upon it. We have procured a designer whom we believe to be the best qualified to design (Continued on page 124)

Scripps Engines in Standardized Boats

This fast 21-foot Ditchburn runabout has just been re-powered with a Scripps F-4 engine replacing an eight cylinder machine. It now drives a 14 by 14-inch Hyde propeller at 2500 revolutions, giving 28 miles per hour, over an accurate course. The smoothness of operation and freedom from vibration is a noticeable feature of the installation



Another fast boat is the 24-foot sea skiff being built by Geo. T. Backus of Fort Pierce, Fla. These standardized boats are equipped with the Scripps F-4 engine. Due to the excellent lines and the power of the engine, these boats are able to do close to 21 miles per hour



The Fox ranch headquarters with the house boat residence of the local manager on the shore

Gullible TRAVELERS

AT 4:40 A. M. on July 16, the log says the mooring line was cast off and Lady Luck turned her bow out from her regular berth at Manzanita, which is in the West side and best side of Bainbridge Island, just across the Bay from Seattle.

The Skipper made a remark at about 4:41 that made an impression on me, and two months later, I knew exactly his reasons.

"All my life, I have hoped to cruise to Alaska in my own boat." Also he headed the log of the trip this way: "Alaska or Bust."

Lady Luck, a heavy type V-bottom cruiser forty-two feet long and nine foot beam, drawing only thirty inches of water, had been built for just the kind of cruise she was now beginning. She had been provisioned with many and sundry kinds of most excellent and nourishing grub, lots of fresh water, over 300 gallons of fuel, kerosene for the burner in the Shipmate range, radio antenna installed and receiving set all hooked up. She was also equipped with one skipper of the species cruising bug, two combination mates, deck hands and anchor hoists in human form, also one cabin boy eleven years old and still asking questions. At various intervals herein, you may glimpse pictures of these several bipeds, and as long as you recognize them as Skipper (or Cap), Joe, Elmo (or Hay Wire), and John, in the order first named, the less additional comment about any or all of them, the better.

Two Thousand Miles of Splendor and Wonderland in Which Game and Fish Abound—Alaska, Nature's Most Wonderful Cruising Ground

By SAM MARTIN



Skipper on the Alaskan cruise

Before the reader gets tired of the suspense, it will be well to let him in on what has so far been kept a dark secret. Skipper is part owner in a Blue fox ranch near Petersburg, Alaska, and planned the cruise for pleasure and also to make it possible for him to work on his ranch for a month. He also asked Joe and Elmo to go along to do the plain and

fancy taffy pulling on the anchor line; incidentally he no doubt figured on a little slave driving, to result in a lot of ranch work done in a short space of time. All his plans were well carried out, but he may have underestimated the amount of fun the crew would get out of the proceedings (pulling a 70 pound anchor out of fifteen fathoms

"At Three O'clock In The Morning" words without music—excepted).

"As for me," John said one day about the middle of the trip, "he took me along to keep an eye on me, and his eye is not the only thing he has put on me several times either."

Now that we are all properly introduced, we will try to catch up with the ship, which has been traveling all this time.

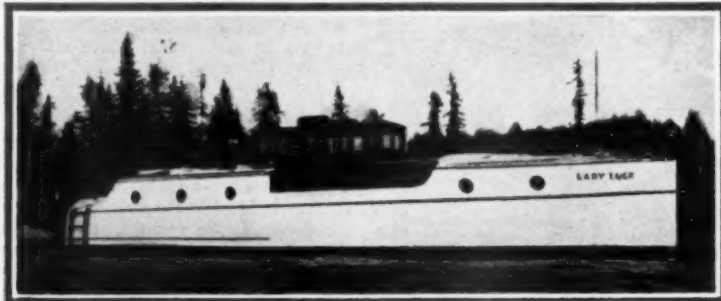
As soon as we were out of Agate Pass, around Jefferson Head and headed NWxW for Point-No-Point, Skipper, who also slaughtered the tinned stores and threw them on the table, tried to light the new kerosene burner in the range. The whole trip was almost wrecked right under the gun, by the burner refusing to burn so



An immense bald eagle photographed with Joe as a background

early in the morning. We had visions of starvation, mutiny and plain hunger. At promptly 7:00 A. M., however, the burner started and was O. K. thereafter. The cook remarked, "this must be a member of the stoves' union, as it is afraid if it starts too early, it might have to work more than eight hours. Yet," he finished, "it is not Union oil it has, it's Standard oil."

Finally, canteloupe, bacon, eggs, toast, and coffee were brought forth for all hands, and a most enjoyable time was—you know. Another thing; I can't possibly remember the menu of all the meals for two months so



Lady Luck the 42-foot cruiser, powered with twin Scripps engines, at her anchorage

be comforted. I would not take a chance on guessing at them, either. Skipper made us take sufficient chances with what we ate, without enlarging matters.

The last remark was intended wit, whereas the fact is that Skip could make as fine flapjacks out of Olympic pancake flour as any I ever flopped a lip over. He is an artist at mixing in plain water.

Point-No-Point, Marrowstone and Point Wilson lights were all passed and the Straits of Fuca reached by 9:00 A. M. These waters are the connecting link between Puget Sound and the Pacific, and are about 20 miles wide. On this day the straits were as smooth as a barnyard puddle.

Friday Harbor, in the San Juan Islands, was reached at 1:00 P. M. and as it is the last American port for 600 miles, all tanks were completely filled with fuel. Now fuel is supposed to be something that burns and produces heat or light, which in turn are mutually interchangeable with power, but this so-called fuel was, to a great extent, plain H₂O as we will relate farther on. Don't worry yourself into an early grave, however, for while it seriously blasted our hopes of Heaven, still it did not cause us to go there or even thereabouts.

We cast off from Friday Harbor, and shortly thereafter crossed the international boundary line into Canada. All stood and gave three lusty cheers for His Majesty, while so doing.

Instead of going out through Active Pass, as the steamer course shows, we proceeded inside the chain of islands, in very beautifully protected waters, for Dodd Narrows,



A large family of blue fox pups having dinner on the fox ranch

which by loafing slightly, we caught napping at dead slack water, and arrived at Knight Bay, across the way from Nanaimo, B. C., completing a run of 16 hours for the day and making over 120 miles. We were all pleased with the excellent progress, the perfect action of the engines and, in fact, with ourselves for being along.

During the night, at Knight Bay, a westerly started to blow and we were considerably bumped against the dock to which we were tied. Next morning early, when we pulled out, we faced the same westerly with the fine prospect of bucking it quartering, for the 80 miles we hoped to make that day.

It was not rough enough to endanger anything of any more consequence than our feelings, however, so

we went ahead. We also went up and we went down, and sometimes side ways and both ways, and then that Friday Harbor wolf in sheep's clothing, that water that should have been fuel proceeded to come down, strainers, feed pipes and carbureters full up, and repeat *ad lib*. Thank God for the man who first thought of twin screws, and thank Skipper for falling for his propaganda, for by emptying first one strainer and carbureter, and then the other, we always had one of the twin engines running perfectly, and so were able to get away from the awful calamity of wallowing in the trough of a heavy chop without power.

After passing Sisters Light, however, the wind suddenly died out, and from then on, until we anchored in Duncan Bay, toward evening, we had a great old lazy time, lolling around on deck admiring the forest fire smoke, which was all that we could see.

That year was the driest ever known on Puget Sound, and fires had been burning for weeks. Fires were going in dozens of places all along Vancouver Island also, and not until we crossed Queen Charlotte Sound, did we escape this blight on the scenery.

Duncan Bay is a very fine anchorage for small boats or large, and while there we watched some natives trolling for salmon. They were mighty successful, too, hooking and bringing to gaff at least a half dozen in a few minutes, just before dark. After darkness came we listened to the Seattle Post Intelligencer broadcast its musical program, Station KFC.

The tide was slack in Seymour Narrows at noon next day, so we slept late and loafed around until then, following into the Narrows a big, black freighter, which was turned and twisted off her course repeatedly by the boils and eddies in the swift tide.

This Narrows is pointed out as a great danger point in this cruise,



This big buck furnished food for a long time and was the prize of the trip



Abundant game is to be found in Alaska making the problem of food supply an easy one

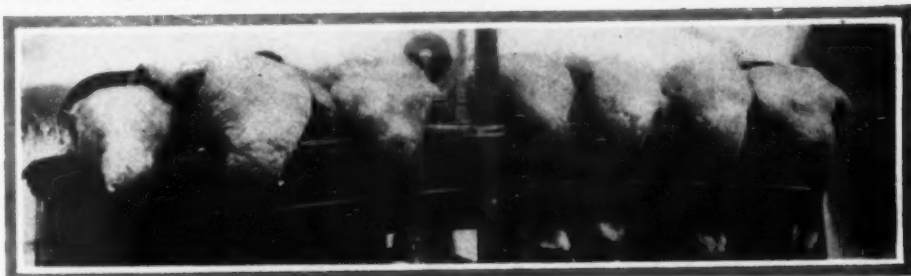
and it would be if one, unacquainted with it, were to attempt passage at any other time except slack water. The Pacific Coast Pilot, however, gives all information as to tides, slack water, and courses for the entire distance so that anyone who can navigate a small boat can make the trip with perfect safety, merely by the exercise of ordinary common-

sense. At slack water, Seymour is as harmless as near-beer, but at strength it has more wickedness than the worst white mule ever distilled. Several small boats have been lost there in foolhardy attempts to dare the tide at its worst.

Johnstone Straits gave us the worst water we encountered on the cruise. Beautiful in its turns and twists, narrow between high mountains, seemingly well protected water, yet the tide runs with such speed, that when an opposing wind is blowing, the tide rips are furious, and would make nasty going for anything under a good-sized steamer.

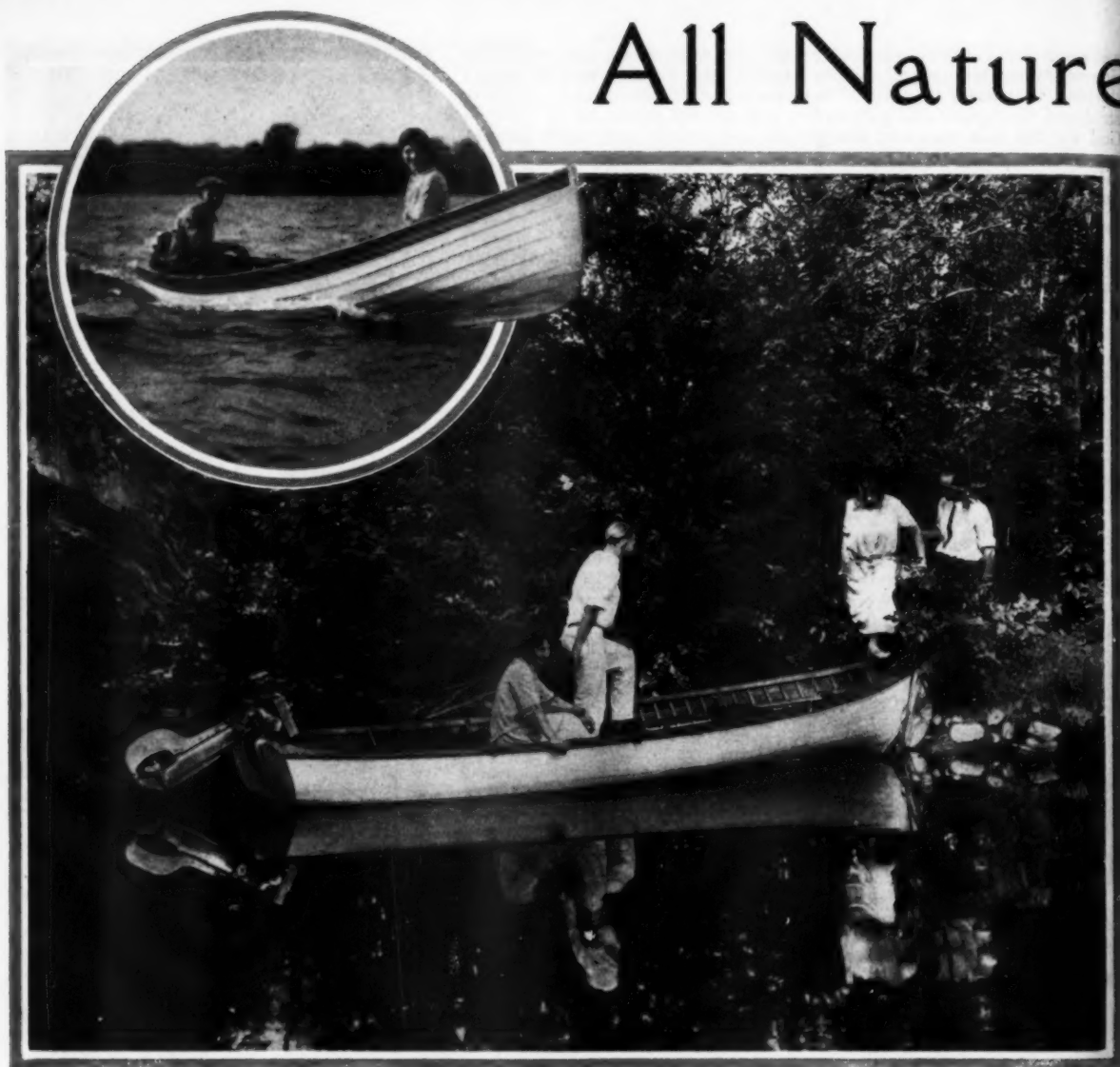
After passing Seymour Narrows, we found Johnstone Straits very rough, and so turned in at Knox Bay and tied to a logging camp dock. We were told that

(Continued on page 126)



Lady Luck's pilot house measured seven geese in width

All Nature



The conversion of the rowboat to a speedy motor launch can be quickly accomplished. A small portable motor is attached to the stern, and — presto, we are ready for a day of fun without effort or exertion. The oars which formerly served to laboriously propel the boat can now be left at home.

Boats with the most modern out-board engines will serve to convey the happy party to a delightful picnic grove and due to the novel method of support it is possible to beach the bow of the boat and tilt the engine clear of the water.

Due to the extreme simplicity of operation it is perfectly safe for the children to handle and sail a boat equipped with this type of engine. For the youngsters there is nothing so beneficial to health and sturdiness as a day spent on the water in the sunshine.

**V
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3
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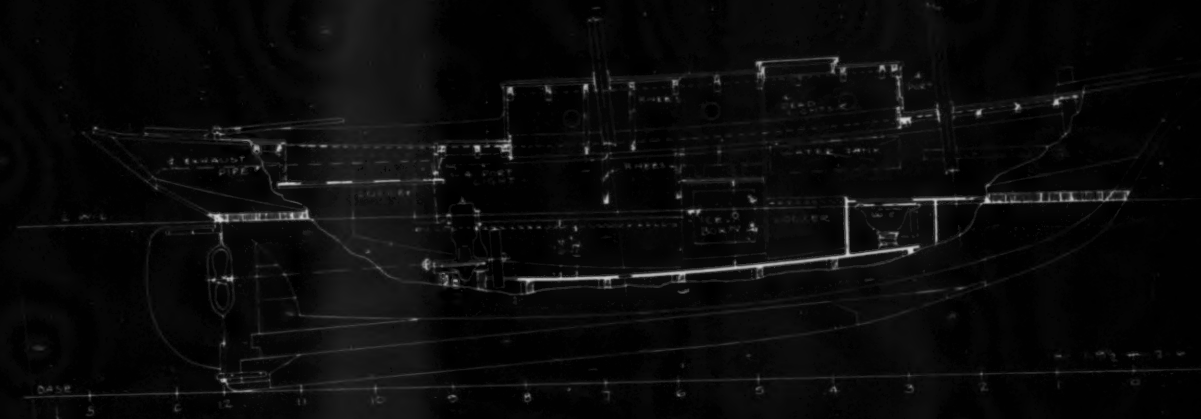
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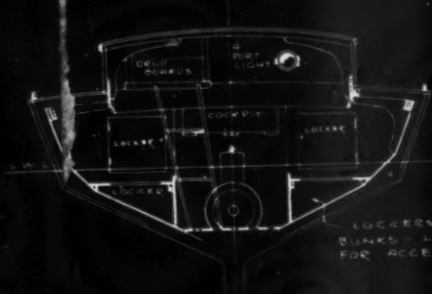
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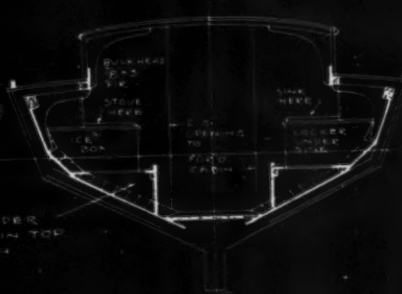
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NOTE -
BUNK TYPE 110 UNDER 11
IS 110 BUNKED SINK
SIDE, WITH LOCKER 1
TWO BURNER ALCOHOL
PORT SIDE, WITH ICE 2
BEING 1 1/2 IN. OR 2
FROM FLOOR LINE 7
1/2 OF CLAMP 3 PAIR
INSIDE WITH EXCEPT
CABIN CARLING AND 7
BUNKS 4 -
DEAD LIGHTS IN CA
OPEN PORT LIGHTS 11
AFT ENDS OF HOU
USE GALV. IRON HARD
EVER POSSIBLE 7



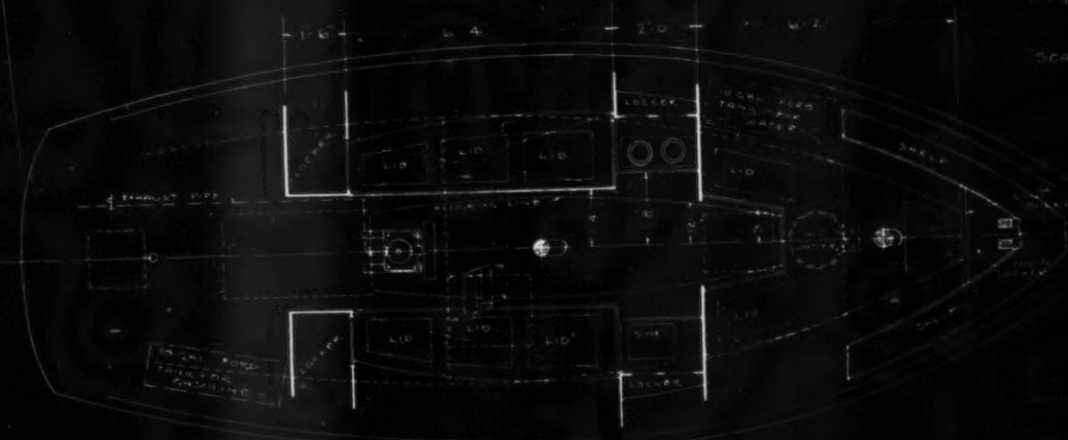
SECTION AT STA. 6
LOOKING AFT



SECTION AT STA. 6
LOOKING FORWARD

LOCKERS UNDER
BUNKS - LIDS IN TOP
FOR ACCESS 44

NO
PERMANENT
27-24-21-67
AUX. L. 200
SCALE 1/2"



STERN CROWN 5' IN
ITS WIDTH BUILT UP OVER
15' 3' CROWN AND
DUNKED WITH
7' 8' 8' 8' 8' 8'



TOP VIEW
STERN TIMBERING

DECK FRAMING

BOTTOM FRAMING

RED BUNK
IN STARD
UNDER
OUTRIG
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ION OR
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DIMENSIONS -

LOA	27-2
SWL	27-0
BREADTH - GA	5-8
BREADTH - B	8-8
DEFT	4-0
FREEDBOARD - BOW	3-1
LEAST	1-8
STERN	2-1
DISPLACEMENT	5,015
BALLAST ON KEEL	2,000
SWL AREA	500
STATIONS SPACED	1-0
KEEL - SLOPED	5
STEAM	4
DIA RUDDER POST	1 1/2
STEADY RIG	

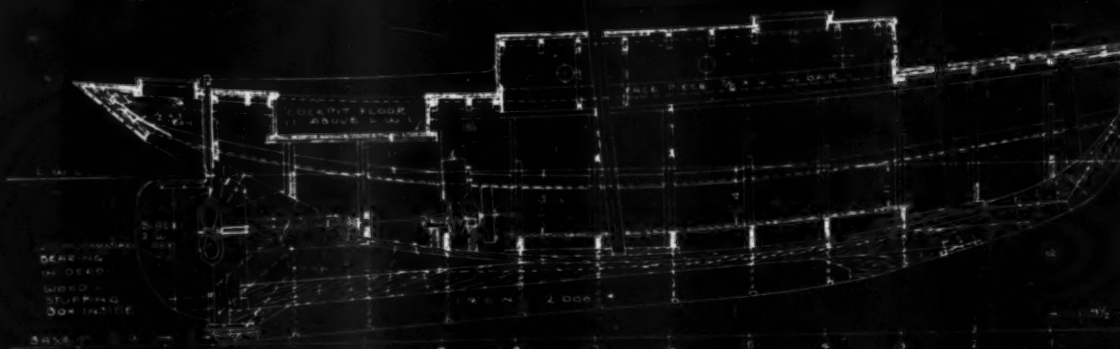
148
EMENT
3-8 x 4-0
ACK SCHOONER

148 APR 1924

IN STEIN
ARCHITECT
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LA H



1/4" SCALE IN FEET



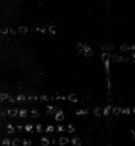
BUDDER POST IS
BOWED IN STEAM
WELDED TO WOOD
END - BOWED IN

IRON KEEL 2000 * KEEL BOLTS 1/2 GALV
12 BOWED IN STEAM WELDED TO WOOD
ENDS ON CENTER LINE - STREETS OBSERVED
NOT RIGGED IN

CARH TOP 1/2 x 3/4 TANG & IR
COVERED WITH 10" DUCK

HOUSETIDE AND
CORRINGS 1/2
CYPRESS OR FIR

DECK 7/8
COVERED
CALV



APRON PLATE FROM
STA 2 TO 10 -
1 x 8 W OAK

KEEL AND DEADWOOD
SIDED 5/8" W OAK

FLOOR TIMBERS 1/2
V PINE ON FORD
FACE OF EACH FRAME
FASTENED TO FRAMES
WITH 3/8" BOLTS W

PLANKING BOTTOM
7/8 W CEDAR W STRIPS
EACH SIDE 1/2 W OAK
GALV SCREW FASTENING
NOT PLUGGED SEAM
BATTENS 3/4 x 1 1/2 W OAK

SECTION AT
STA 10

TYPICAL SECTION
AT STA 6

SECTION
STA

MOTOR BOATING'S BUILD A BOAT Series

COOT An Auxiliary Skipjack Schooner

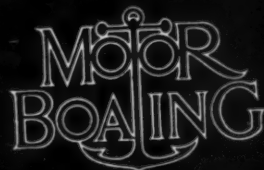
Lines

27'-2" x 21'-6" x 9'-8" x 4'-0"

Scale $\frac{1}{4}" = 1'$

*Designed
by*
WILLIAM ATKIN

Especially For



119 West 40th St
New York
N. Y.



V
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3
—
5

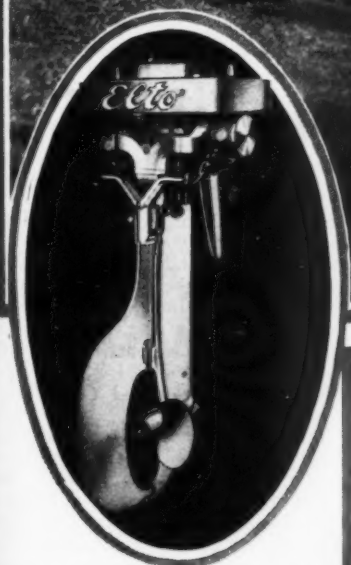
M
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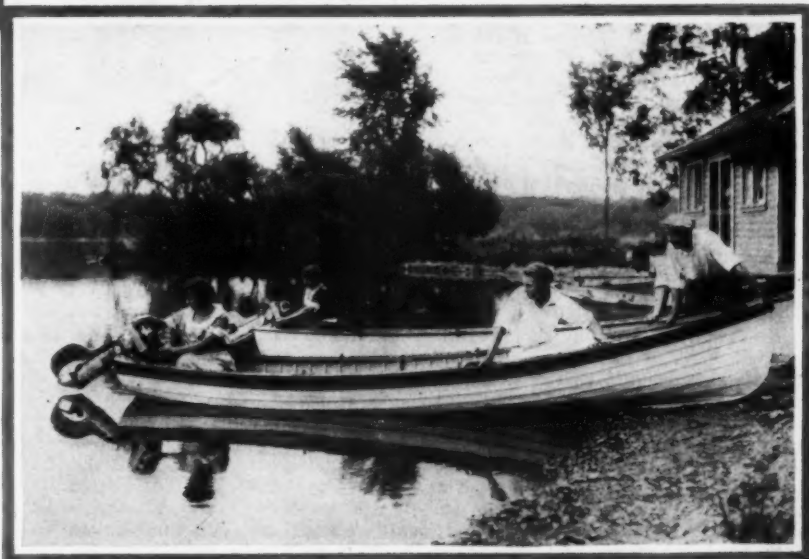
Calls You

*What Is More Delightful Than A Day's
Outing on The Lake and River When The
Springtime Freshness is in The Air*



After the keen thrill and excitement of a race to the picnic grounds by the several boats of the party the lunch will be all the more tempting. Father, of course, must immediately go off in a boat by himself to catch a special mess of fish for lunch.

One of the most highly developed and efficient little outboard engines being built today. This machine has two opposed cylinders and develops a great deal of power for its weight. It is arranged to start surely and quickly on a quarter turn of the flywheel.





HUCK Says THIS is the LIFE

Commander Huckins of Boston, for the past 32 years, but now of Miami Beach, Fla., with a few of his tourist friends. Left to right: Miss Helen Ingram, Jacksonville, Fla., Miss Margaret Clark, Washington, D. C., Mrs. L. B. Archibald, Milwaukee, Wis., and Mrs. H. A. Jackson, Pelhamwood, N. Y.

WELL Chap if you doesn't like what I writes about your Speed Boat Races down here, you knows what you can do about it. This aint intended to be the kind of a story you'll write. You'll say, "With ten thousand spectators lining the shores of enchanting Biscayne Bay, the tropical sun shining down on America's most beautiful women . . ." Now they was there all right, they was, but you won't tell the half of it and I proposes to tell the whole entire story, so's your subscribers will be informed correct. Now while I admits that you're a hard working guy and you does such little things as having flags, guns, score sheets, signs, officious badges on hand and getting the fast boys to bring their boats down here and such-like, you knows that I done the real important work here and that the races, they wouldn't of been a success if I hadn't done my stuff.

Understand I aint laying it up against you for coaxing me down here. I has a good time. This Flamingo is a bird of a hotel even if a airplane nearly flies in my window yesterday and the only trouble is breakfast it is over before I gets up and the water, it is so hard, I can't get up no lather and I has a favorite place where I cuts myself every morning when I shaves and I has to telegraft back home for some more money every coupla days and unless you pays me a coupla thousand dollars for these facts, I doesn't break even and then I has to go back and go to work. Nothing aint like what I'm used to here noways. Up in Marblehead where I parks Kex, off'n the Eastern Yacht Club, when I aint making full speed at

Inside Dope on Miami-Havana — Speed and That Sort of Thing



2.1 knots, there is only one boat what goes better'n 20 knots and they don't use her, and anyway our New England souls, they is too cold to go faster'n a dignified walk. I finds down here that a yachtman is a feller that owns a boat which is full of machinery and a ice chest and no place to sleep and talks about going "upstairs" and sitting "out front" in what I calls a forward cockpit, and looks pretty while a crew of six men runs him around so fast he can't see nothing but a blur of shoreline and the engines, they make so much noise, you has to write a letter to anybody you wants to talk to. But they is nice fellers y'understand and they doesn't let you get thirsty only they has never steered a sailboat down the Maine Coast in a fog, so they isn't yachtsmen, in fact the only sailboat I sees down here has a red sail so as everybody will know it's dangerous and keep away, which they does.

This Miami Beach though is a wonderful place and comes from what they calls imagination. They sticks a big pipe down in the water with a lawn mower on the end of it, runs the pipe through a pump aboard the dredge, sticks the other end of it behind a seawall they has just built around a second hand jungle, starts pumping and pretty soon they has a swell island with a deep bay around it. The next day a feller sticks a few seeds in the ground, and three weeks later, if he don't stand from under, a ripe cocoanut falls off'n his tree and beans him. Then the next week a coupla thousand frost-bitten cuckoos come crowding down from up North, with their tongues hanging out looking for a place to sleep and six people gets killed in

The site of the Hotel Flamingo Miami Beach, Fla., as it looked a few years ago. Below will be seen the same site today

the rush trying to buy up the land at a thousand berries to the front foot. The government, they gives up trying to make a chart of the place because by the time they gets them printed, they is six more islands and two fathom of water where the chart shows nothing but sand flats.

Well then they has these speed boat races. I don't know what its all about and I doesn't know who owns the boats because they all looks alike and they runs so fast you can't see them but anyway I crowds into the judges stand and says to Commodore Kotcher "Lets go" and he bangs the gun and a coupla guys wave some flags and the exhausts, they snorts and they is off. After that everytime a loud noise

and a bunch of spray goes by I marks down a mark in whatever column I feels like and the chief timer, he presses the button and a little machine prints down some figures that nobody knows what they means and ten fellers who is messing up my dope, who can't read the big sign in front of them what says "Quiet" starts yelling for the time, and then somebody says, "How many laps has the T 13 made Huck" and I says "Howthell should I know" and the judges, they was just about to crown me, when

three boats break down, two boats run into each other, one finishes, four women gets pushed off the dock and everybody is happy and joins in a hearty cheer because I runs the races so perfect.

The next day they done the same thing over again except that they has a bunch of airplanes whirling around dropping bombs and willya believe me they misses the crowd and the target everytime. As all the drivers is dizzy by this time and all the engines broke down they calls it enough and



The Flamingo today. Without exception, the last word in everything

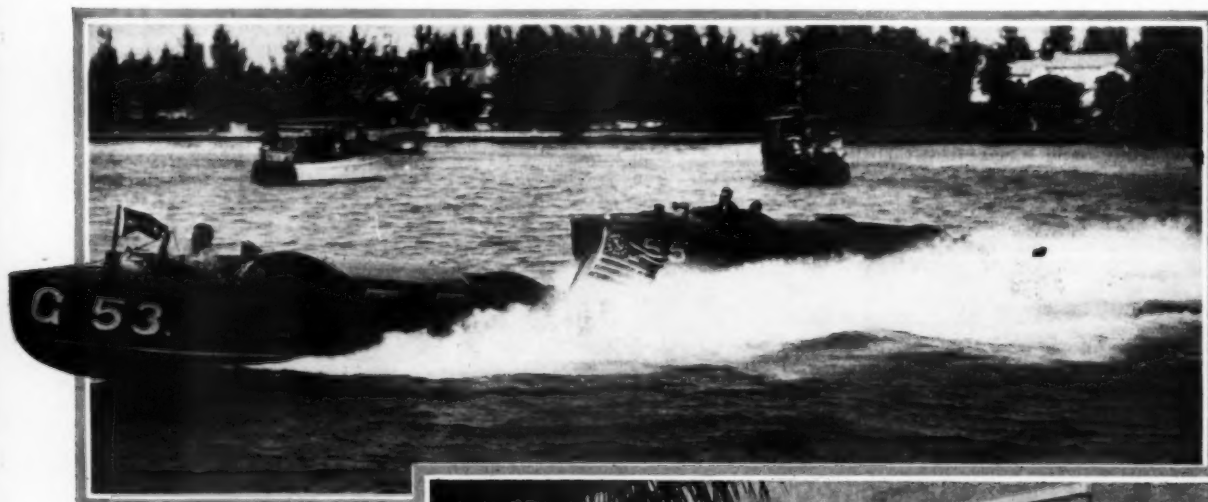
holds a big banquet that night at the Casino and everybody comes from miles around so they can say they was there even tho they doesn't know what it's all about. They has a whole stock of cups on show that is too big to get on your mantelpiece and some fellers that think they has leather lungs, they start making speeches telling each other what great men they was but nobody listens to nothing so they starts giving away the cups to all comers but I gets into the line a little tardy-like and they runs out of cups before I gets to the head of the line and I don't get mine which was a mistake Chap. The next day one of these cup-getters, he runs his boat up the Grand Canal at fifty knots, slams a thirty footer up against the concrete wall and takes two plank out'n her and rolls a house boat containing one perfect lady, up on her beam ends—meaning both—and today I poses as his lawyer and settles a thousand dollars of claims for fifty five and don't get not a cent of fee which proves I aint no lawyer.

Then Chap you says "Come to Havana" which I done. It has took me one week back in Miami and three hours of sleep every night to get over that party to where's I can again write intelligent. Havana is a great place but if you stays there too long and gets entertained proper you is liable to be shipped back in a box collect. We lands and is put into a Ford which is decorated like Cleopatra's Barge. Now I never seen Cleopatra's Barge but a feller what saw it once says it was a swell boat. Anyways we starts off at about forty knots and runs loose all the way up to the hotel. They passes on whatever side they feels like and when they gets to a corner, they blows their horn and puts on a little more speed and if they aint another

car coming the other way you don't get clanked. The drivers and the cars, they both runs on alcahol. They is six cops to every block dressed up like they was just about to do their act in the "Prince of Pilsen." They stands around looking handsome while the cars bust up and when they gets thirsty they steps into the nearest bar and has a drink on the house. If you is on foot and gets runned over and killed, all right. If you doesn't, you get arrested. We arrives at the hotel and before they even lets us up to our rooms they leads us to the bar and we has three "Presidentes" that slips down easy-like and starts to work at once.

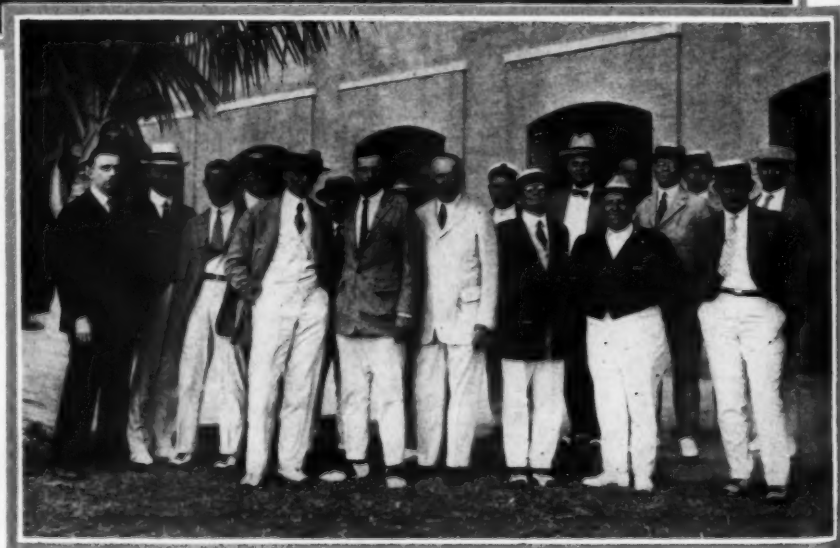
About this time I notices that the trolley cars, they has two trolleys which worries me a lot until next morning when I knows I is sober and sees they is still two trolleys and it is all right. Then they leads me to my room and I finds they runs everything under my window but the freight trains and just about as you think you is going to get to sleep about three o'clock in the morning, they kills a coupla bulls outside or starts a revolution or something.

That night they takes us out to the Havana Yacht Club. We rides about ten miles out by the swellest lot of houses with iron blacksmith work over the windows, I ever sees. The yacht Club, it is about the size of Madison Square Garden, cost about a million bucks and they tells me they builds it without having to borrow no money atall, whic aint the case of our clubs up North but maybe they doesn't get so much interference from old man Volstead down there. These Cubans they don't speak such good English as I does but they sure makes up for it in hospitality. They is used to much more serious drinking than us up in a dry place like Miami and they (Continued on page 88)



Two of the Belle Isle Bear Cats racing at Miami. The leading boat is Pee Dee II owned by W. N. Churchill of Burlington, Iowa. Both boats are powered with six cylinder Hall-Scott marine engines

The Regatta Committee at this year's Southern race meet. Left to right, E. E. Shaw, J. P. Stoltz, Caleb Bragg, Dr. Feid, E. G. Kewell, C. W. Chase, C. F. Chapman, Commodore W. B. Wilde, Commodore C. W. Kotcher, Thomas F. Pancoast, Commodore A. A. Schantz, A. C. Nooby, C. E. Sorensen, F. L. Weede



The SPIRIT of the SEA ENSHRINED

CAPTAIN E. A. McCANN

The Natural Love of All Americans for the Sea Comes to The Surface In Collections of Rare Models of Boats, Both Antique and Decorative



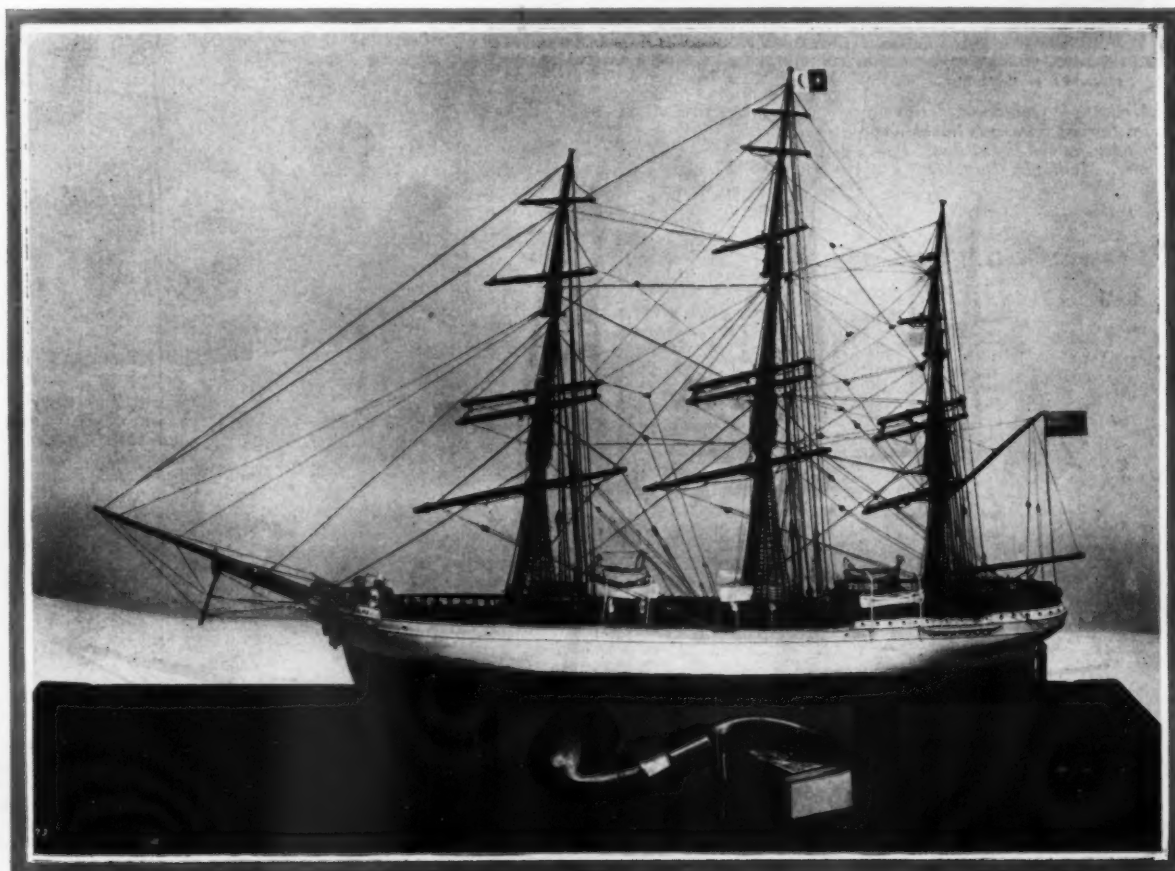
THAT the one-time shipmindedness of the American has not entirely vanished from the land is evidenced in the number of men who collect ship models; from one treasured example to what is practically a museum; and now that we are not so busy building real ships, more are turning their attention to the making of the miniature replicas.

Some there are who collect purely because of antique value, others for their decorative value, but more because they still retain much of the boy in their disposition and love the ship or its model for its suggestion of romance, adventure and beauty.

Ship models may be roughly grouped into four classes,

the antique and modern reproduction of the caravel and frigate type of vessel; the frankly decorative type; the native made, and the more modern such as the clipper or whaler.

Of the first mentioned those made in the early English naval shipyards for the builders to work from were very exact and replete with delicate workmanship, consequently beautiful, as were the little bone and box-wood models of the same period, while some of the modern reproductions of these show almost equally meticulous care in exactitude and finish, they have not the fictitious antique value nor quite that tone only age can give, but are nevertheless very interesting and decorative.



The composite clipper ship Torrens, a 13-inch model made by the writer and the first ship on which he sailed



Photograph by E. Levick

Model of Guinivere designed by Loring Swasey. Yacht and model owned by Edgar Palmer. Model by Boucher



Photograph by
Keystone View Co.

Of the purely decorative models there are all too many on the market, mostly imported to sell, which are neither correct, possible as ships, nor to my thinking decorative, as they are not truly artistic.

Others, however, though not exact replicas are made with sufficient care to be works of

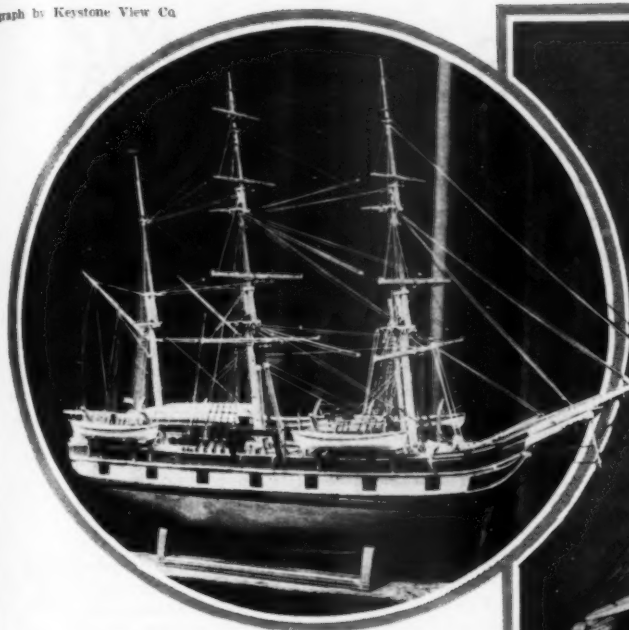
Model of a four masted bark
made by Frank E. Daily



Model of a nootka, a
Vancouver Island
canoe. It contains
miniature gear, fishing
materials, spears and
complete equipment.
Collection of Alfred C.
Blossom

A clean lined model of
an American wooden
clipper ship, in the col-
lection of R. V. Schluter

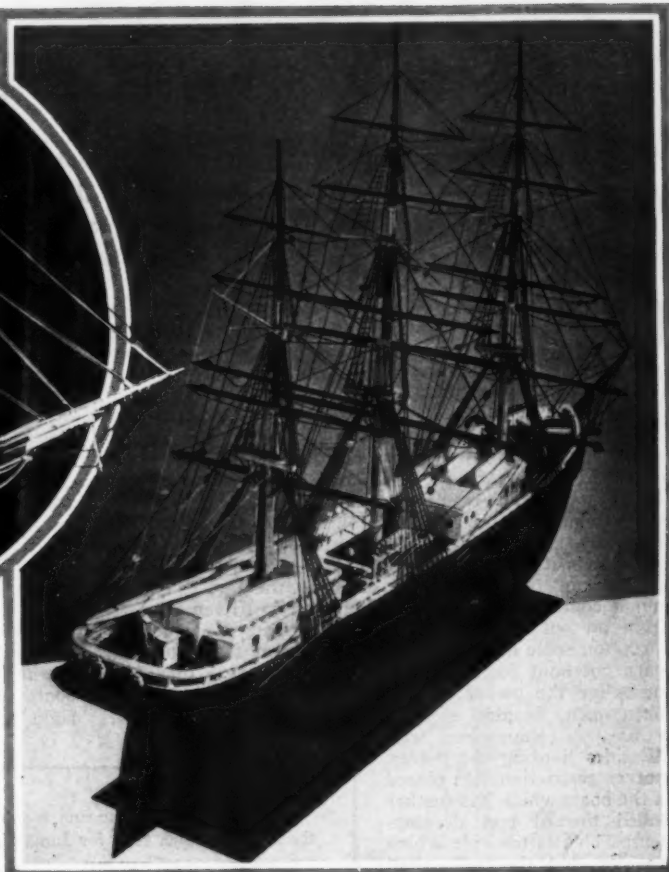
Photograph by Keystone View Co



art. They are carved from actual lines and sails plans, but are painted and emblazoned decoratively in scarlet and gold, blue and silver and so forth and have enough correct detail to make them worth more than the first glance. The lines should always be rhythmic and the color suggest the gaiety and colorful period in which they roved the sea to world's unknown.

However, much has been said and written about these types, (Continued on page 152)

*View of the
Lagoda of New
Bedford, 42 inches
long*



*Model of the ship Panay, one of the
famous ships in American History.
Twenty-two inch model by W. E.
Northey, Salem. Now in Peabody
Museum.*

*A clipper ship mo-
del with sails carved
in wood, twenty
inches long. A lit-
tle crude but inter-
esting. Original in
Peabody Museum*



*Photograph by
Chas. Darling*

Class Racing for Sensible Boats

The American Power-Boat Association Adopts Rules for A 21-Foot-335 Cubic Inch Displacement Class to be Known as The Junior Gold Cup—Perpetual Trophy Presented by Commodore H. B. Greening and Colonel T. A. Duff—First Race to be Held This Summer At Detroit

UP TO the present time, a majority of the racing for the country's most valuable and celebrated trophies has been limited to the faster and more expensive types of boats. The first step away from this practice occurred about three years ago, when the American Power Boat Association changed the Deed of Gift governing its Gold Cup so that competition for this historic trophy should no longer be open to hydroplanes with an unlimited amount of power, but restricted to a more sensible type of displacement craft powered with a motor of not over 625 cubic inches, which is equivalent to about 200 horsepower. This change by the rule makers, has proven the greatest stimulus to motor boat racing in its history. From an entry list of only two or three craft, the event in the last couple of annual contests has attracted from ten to fifteen starters. From an out and out racing shell costing as much as \$50,000 in some instances, the competing craft are now real boats, not built for racing alone, and of a type that does not oblige the owner to take along a crew of ten or a dozen men, besides a whole machine shop, in order to have a chance to win.

Besides limiting the power, another restriction was placed on the boats which has further tended toward real development. This is the rule which provides that the hulls shall not be less than 25 feet in length on the waterline. In the days of the planes, during the last several years they were permitted to compete, lengths of hulls had been growing shorter and shorter until nearly a thousand horsepower in a 20-footers was not uncommon, so some minimum length restriction was necessary.

The change from hydroplanes of unlimited power to displacement boats of restricted piston displacement or engine size, together with the lengthening of the boats from around 20 feet to 25 feet and longer, has not reduced the racing speeds very materially. For the 1923 Gold Cup, there were developed and produced, several boats of 26 feet in length powered with 625 cubic inch motors which had a speed very close to 50 miles an hour on the straightaway. Although the overall length of these boats was not enough to make them seagoing liners, yet they were real boats in every particular. Without doubt, for the 1924 Gold Cup race, which will be held at Detroit on August 30, speeds in excess of 50 miles an hour will be shown.

While the Gold Cup boats of today, as has been pointed out, are a decided improvement over the craft of yesterday and decidedly cheaper in first cost and yearly maintenance, yet to build and race cost in the neighborhood of from \$12,000 to \$15,000 on the average. This places these boats beyond the means of many persons interested in racing who would own craft if a class for less pretentious boats was provided. This thought led the American Power Boat Association at its last annual meeting to provide for a class of 21-foot displacement boats powered with stock marine motors of not over 335 cubic inch piston displacement.

The first race for this new class will be held at Detroit on August 29 of this year.

Commodore H. B. Greening of Hamilton, Ontario, owner of the well-known Rainbows, and Colonel T. A. Duff of Toronto, owner of Ionic III, that real Fisher Trophy racer of 1922 both of whom are sportsmen interested in the development and racing of honest-to-goodness boats, have very generously presented to the American Power Boat Association a very fine perpetual trophy for the 335-21-foot class which will be known as the Junior Gold Cup Class.

The complete Deed of Gifts governing the competition for the new Junior Gold Cup Class follows:

ARTICLE I

Any person, persons, group of persons or permanently organized club or association in North America, which is a member of the American Power Boat Association, having a regular membership of twenty-five or more, and devoting its attention in whole or in part to the development of power boats and to the promotion of the sport of racing boats or yachts of that character, shall always have the right to challenge for the cup and to run a match therefor, provided such challenge

shall be made and such match shall be run in accordance with the terms and conditions of this agreement.

ARTICLE II

Matches for the cup shall be limited to boats propelled by power only.

ARTICLE III

All matches shall be run under the rules and regulations of the American Power Boat Association governing sanctioned races, as adopted or amended at the annual meeting of the Association next preceding the race.

ARTICLE IV

All races shall be managed by a Race Committee of five, as follows: The three members of the Racing Commission of the American Power Boat Association (or representatives appointed by them), one representative named by the holding club, and one representative named by the first challenging club.

ARTICLE V

The club holding the cup shall defend it between May 30 and October 1, both inclusive, against all challenges, under the conditions as set forth in this instrument. The date for the first race of any series for this cup shall be not earlier than May 30 nor later than October 1.

ARTICLE VI

All challenges must be made in writing, signed by the person challenging, or Secretary (or proper official) of the challenging club and must be forwarded to the Secretary of the American Power Boat Association. A copy of the challenge must be sent to the Secretary of the club holding the cup and a copy to the Secretary of the Racing Commission of the American Power Boat Association. To insure a contest, one challenge must be delivered at least six months before the date set for the match. Subsequently, other clubs may challenge (Continued on page 88)

Some of the stock marine motors available for the 335 cubic-inch class for Junior Gold Cup:

Motor	Bore and Stroke	Piston Displacement Cubic Inches	Rated Horse Power
Scripps	4 cyl. 3 3/4 by 5	220.88	55
Wisconsin	4 cyl. 4 by 5	251.32	40
Packard	6 cyl. 3 3/8 by 5	268.38	45
Wisconsin	6 cyl. 3 3/8 by 5	268.38	50
Gray	4 cyl. 4 by 6	301.60	35
Fay & Bowen.	4 cyl. 4 1/4 by 5 1/2	312.12	40
Hall-Scott	4 cyl. 4 1/4 by 5 1/2	312.12	70
Red Wing	4 cyl. 4 1/2 by 5	318.08	40
Brennan	4 cyl. 4 1/2 by 5	318.08	35
Kermath	4 cyl. 4 3/4 by 5 1/2	330.72	50

SMALL MOTOR BOATS

Their Care, Construction and Equipment

A Monthly Prize Contest Conducted by Motor Boatmen

Questions Submitted for the July Prize Contest

1. How can a cranky or unstable hull be corrected of these faults, at a nominal cost for material and labor.
(Submitted by V. L. S., Wilmington, Del.)

2. Describe and illustrate a simple, inexpensive iceless refrigerator which the boat owner can build with ordinary tools.
(Submitted by E. M. D., Newport, R. I.)

Amateur Boat Planking Methods

Skilled and Experienced Readers Suggest Correct Ways to Secure A First Class Hull With Least Effort and Waste

Answers to the Following Questions Published in the March Issue

"Describe the best and correct method of planking a boat under conditions existing in the amateur builders shop."

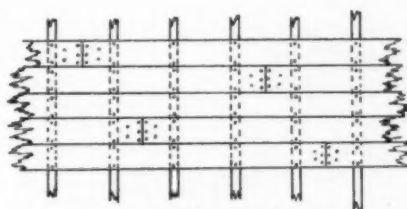
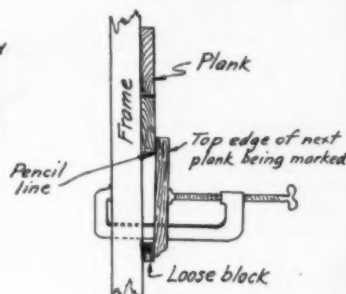
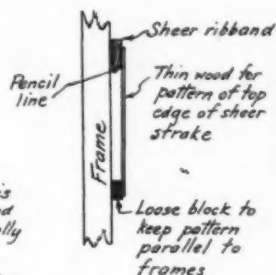
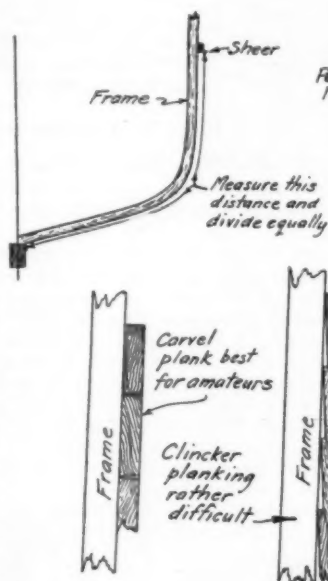
Easiest for the Amateur

(The Prize-Winning Answer)

TO the professional, planking is the most pleasant part of boat construction, but the amateur, hampered by lack of knowledge and lack of proper tools usually finds planking the most difficult of all jobs. If the amateur will use the system outlined in this article and the accompanying sketches he will find the work greatly simplified. While the sketches show a round bottom boat, the system applies exactly as well to a V-bottom providing the work is divided into two parts, one from the chine up and the other from the chine down.

After the frames are erected it is usual to leave the ribbands in place until the planking is on. See that the top ribband is of clean, straight stock and that it is fastened to the frame head so that its LOWER edge is even with the sheer marks on the frame. Of course this means that the frame heads must be a little longer than they will be eventually, but this is always the wise thing to do, for the surplus length can be cut off after the clamps are in place and the deck beams fitted.

See that the top ribband bends in a fair, even curve, for that curve will eventually be the sheer line for your boat and a poor sheer does much to reduce the value of a craft.



Closest Allowable Spacing of Plank Butts

Several planking devices and hints suggested by W.C.T.

Having now obtained the width of every plank at the longest frame, write the width so obtained on the face of the sheer ribband at that frame. Then duplicate the process

Rules for the Prize Contest

ANSWERS to the above questions for the July issue, addressed to the editor of *Motor Boating*, 119 West 40th St., New York, must be (a) in our hands on or before May 25, (b) about 500 words long, (c) written on one side of the paper only (d) accompanied by the senders names and addresses.

The name will be withheld and initials used.

QUESTIONS for the next contest must reach us on or before May 20. The editor reserves the right to make such changes and suggestions in the accepted answers as he may deem necessary.

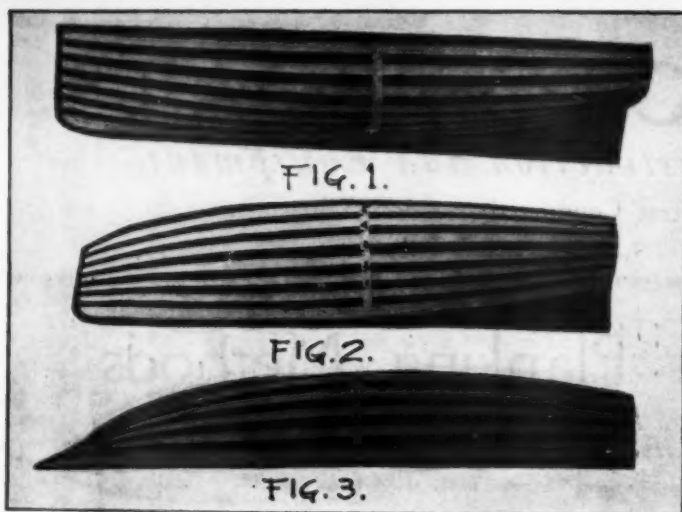
The prizes are: For each of the best answers to the questions above, any article or articles sold by an advertiser advertising in the current issue of *Motor Boating* of which the advertised price does not exceed \$25, or a credit of \$25 on any article which

sells for more than that amount. There are two prizes—one for each question—but a contestant need send in an answer to only one if he does not care to answer both.

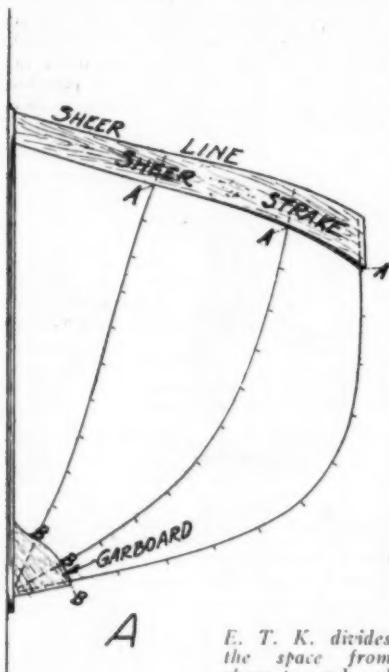
For answers we print that do not win a prize we pay space rates.

For each of the questions selected for use in the following month's contest, any article or articles sold by an advertiser advertising in this issue of *Motor Boating* of which the advertised price does not exceed \$5, or a credit of \$5 on any article which sells for more than that amount.

All details connected with the ordering of the prizes selected by the winners must be handled by us. The winners should be particular to specify from which advertisers they desire to have their prizes ordered.



Small model planked by A. G. W. with alternate black and white paper strips



E. T. K. divides the space from sheer to garboard

at every frame, or every other frame if the spacing is 12 inches or less, writing the width for planking at that point upon the ribband. At the stem you will have to measure along the rabbet.

You now know the width of each plank at every frame, but you do not know the curvature that plank must be given to shape it to the sheer and round of the boat. To get this most important item you will need a board 8 or more

inches in width and long enough to reach around one side of the boat from stem to stern. If you cannot get one long enough, splice two pieces together with a butt block. Now have that board planed down so that it is not over 3-16 inches thick. Clamp, or tack it lightly but firmly outside of the sheer batten so it overlaps the lower edge of the batten at every point. To help in keeping it in place slip a few little blocks under the lower edge against the frame to hold it out parallel with the latter. Now go inside the boat and draw a pencil line upon the thin board at the point where the bottom of the sheer batten touches. Take the board off, cut down to the line and try it back on the boat for fit. After a little trimming it should fit perfectly against the frames and up against the ribband. Now use that as a pattern for the top edge of your upper strake. Clamp the latter in place and then measure down the specified distance at each frame for the width and take the plank off again. Connect all the width marks with a pencil line, using a batten to make a fair curve and the plank is all ready for the final cut and fastening in place.

Next get out the garboard plank, using the other edge of the thin board as a template for that. After the gar-

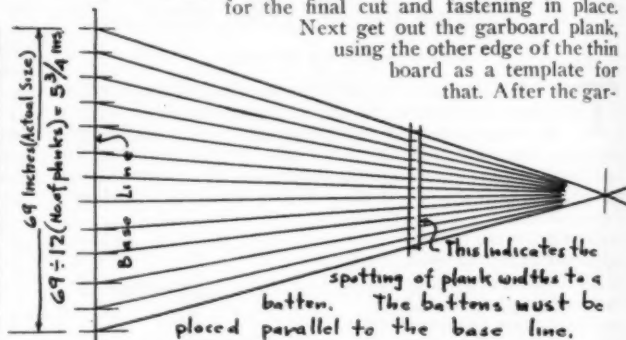


FIG. 3 PLANKING DIAGRAM.

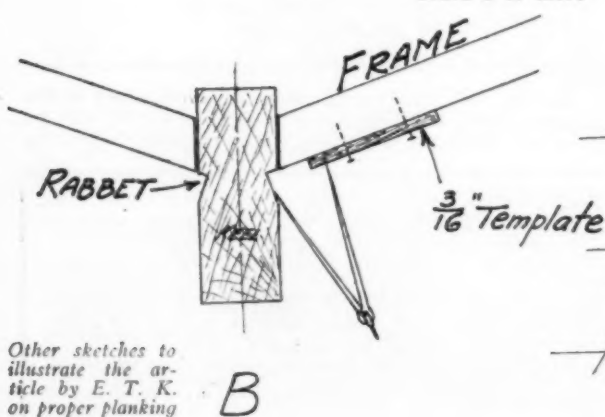
FIG. 4 PLANKING SCALE.

Convenient scale by A. G. W. for dividing any girth dimension into uniformly equal parts

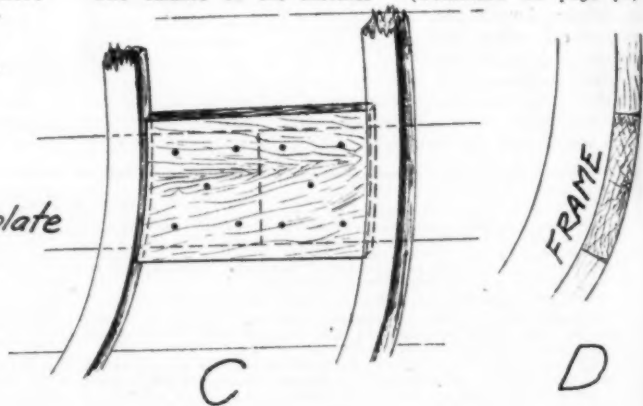
board is fastened proceed to plank from the top down and the bottom up until you have just room for one more plank, called the shutter. It is not necessary to use the thin wood as a template after the sheer strake and garboard are fastened, for the frame will be sufficiently strong so that the planking lumber itself can be clamped against the edge of the previous plank as shown in another sketch.

If the twist in any plank is too great to bend cold, wrap the plank with burlap or rags and pour on hot water, at the same time putting as much of a strain in the proper direction as you can with safety. After a little soaking it will bend around properly.

The balance of the sketches (Continued on page 70)



Other sketches to illustrate the article by E. T. K. on proper planking



Safe Mooring for The Cruiser

Ground Tackle Which Will Safely Hold Your Boat and Which Can Be Readily Handled From The Deck

Answers to The Following Question Published in The March Issue

"What have you found to be the most acceptable type of mooring equipment with particular reference to ease of handling from the boat?"

Mooring Made Easy

(The Prize Winning Answer)

THE safety of your boat depends largely upon the strength and holding power of its mooring. Like a chain, the mooring is only as strong as its weakest link, and to be free from worry when a storm comes up, your mooring should be built in the strongest possible manner relative to the strain it must withstand.

The simplest mooring is generally conceded to be the best, but the chain leading from the anchor to the bitts is unhandy and will chafe the bow, and a buoy must be attached every time you leave the mooring. Such buoys are generally of the can or cork type which float but little above the water's surface and are unhandy to pick up, especially when alone. By using a substantial spar buoy at the end of the chain and a rope cable from the buoy to the bitts the mooring can be made easy to pick up without sacrificing strength.

There is no questioning the superior holding power of the bulb shank mushroom anchor, it being several times that of its weight in concrete or stone. If you do not care to purchase a mushroom; a car wheel, or a natural or reinforced cast stone, but much heavier, will answer. With a car wheel or stone, attach a heavy galvanized eye bolt at the center and rivet the nut. The reinforced concrete anchor can be cast in any box of suitable size, the eye bolt and reinforcing being placed as the concrete is poured. A 1-2-3 mix; one part Portland cement—two parts clean sharp sand—three parts broken stone or gravel; is satisfactory for use under water. Expanded metal is the best reinforcing material but it must be completely covered by the concrete. The eye bolt may have a plate or eye at the lower end, but in either case, it is advisable to so place reinforcing bars that the strain will not all come at one point. As soon as the concrete has set, remove the form and let it age for two or three weeks. Concrete weighs from 100 to 130 pounds per cubic foot.

The length of the chain should be from $1\frac{1}{2}$ to 5 times the depth of the water at high tide, and is attached to the anchor and buoy with swivel shackles. The longer the chain the greater the holding power of the mooring.

The spar buoy can be purchased already strapped and painted or you can make it from a pine or cedar stick. Cedar fence posts answer very nicely. A size of from 6 to 10 feet in

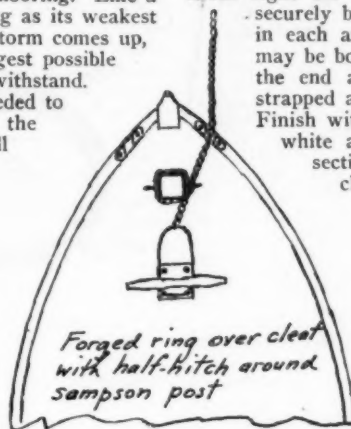
length by from 6 to 8 inches in diameter, according to the length of the boat, is recommended. Plane smooth and taper the top third down to 3 or 4 inches in diameter. For the shackle straps $\frac{1}{2}$ x $1\frac{1}{4}$ -inch galvanized iron will be about right for the average boat. The straps must be securely bolted to the spar with two $\frac{1}{2}$ -inch bolts in each and the nuts riveted on. The upper end may be bored and countersunk about 6 inches from the end and the cable spliced in, or it may be strapped and the cable spliced to it over a thimble. Finish with copper paint below the water line and white above, padding the top with rope or a section of automobile tire to prevent it from chafing the boat.

The spar may or may not be a direct part of the mooring. Based on the theory that the buoyancy of the buoy acts as a spring and breaks the direct line of pull on the anchor and partially relieving the strain on it, this method would seem the best.

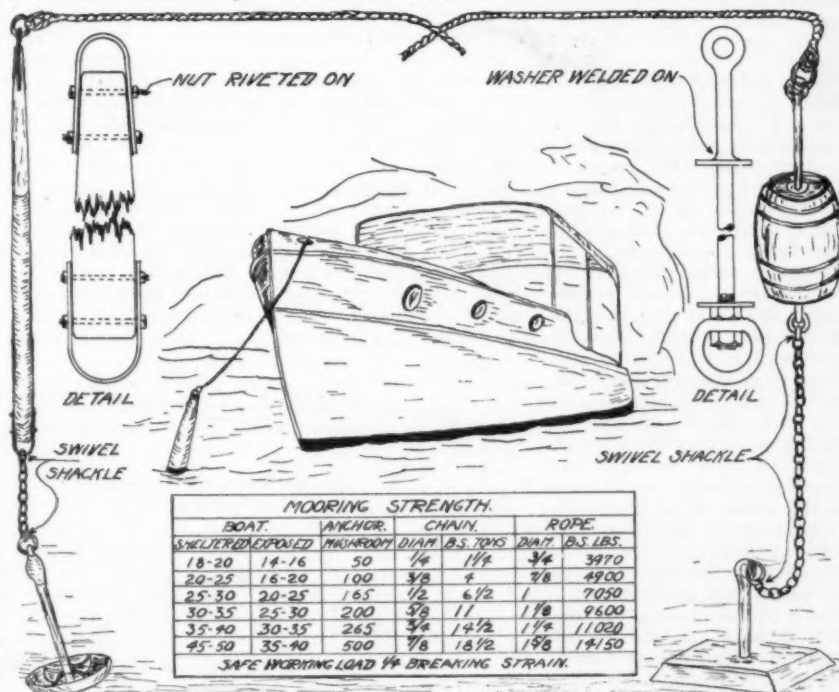
When leaving, unship the cable and loop it through the strap so that the end can be easily grasped and led aboard where it is made fast by slipping the eye splice over the bitt and taking a couple of turns around it.

A keg with a long eye at the upper end and weighted to float upright, or a can buoy having the rod running clear through it are the next best for easy picking up, but will not equal the spar.

In using the table, which was arranged from the recommendations of Wilcox Crittenden & Co., due consideration



V. L. S. secures the boat with a forged ring and a half-hitch



W. B. M. suggests several mooring types and also the minimum sizes of tackle

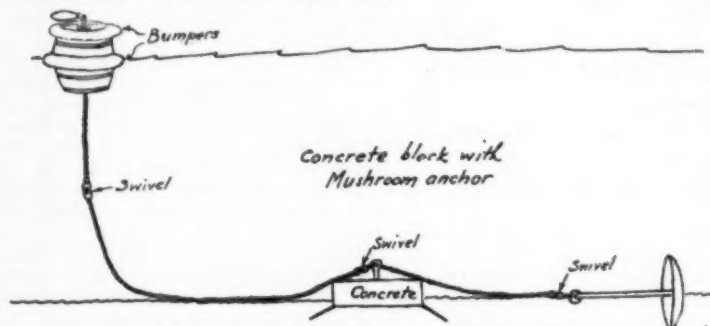
must be given the nature of the bottom, whether the anchorage is exposed or sheltered, the amount of scope available at the anchorage and the weight and type of the boat. Allowing a safety factor of four, the safe working load is one-fourth the breaking strain. All shackles and swivels should be proportionate to the size chain.

W. B. M., Newburgh, N. Y.

An Inexpensive Mooring

THE illustration will show an inexpensive and easily constructed mooring, which, in view of past performances, is very dependable and adaptable. It will hold in practically any bottom, and is very long lived when constructed as shown and described.

The mushroom anchor should be galvanized and of such weight as to make it a safe mooring in itself; the concrete block is also heavy enough to hold the boat, especially with the projecting rods which quickly become bedded into the bottom and prevent the block from sliding or from having a tendency to turn over; therefore, between these two



How the anchor of V. L. S. lies on the bottom

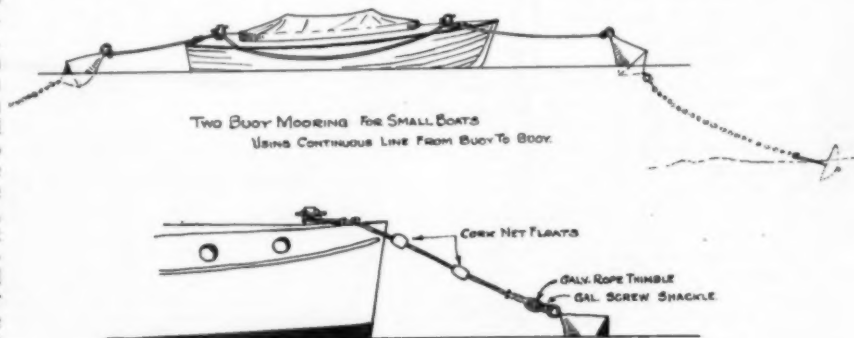
anchors and an ample scope of chain, you can rest assured that your boat will stay put as long as your bitts hold on deck. The buoy is any kind of a heavy keg or barrel of ample size to support one and one half times the length of chain reaching from buoy to bottom at high tide, around which are fastened two bumpers made up of heavy canvas, old automobile shoes, old fire or steam hose, etc., which should be stuffed with ground cork. A piece of heavy brass pipe, of sufficient diameter to allow chain to slide through it easily, is run through buoy and fastened top and bottom by screw fastened brass pipe flanges over rubber or canvas gaskets. The chain is of large diameter, galvanized, and should have several swivels in it (as shown in sketches), in order to keep chain from kinking and breaking in case of sudden strains. Lap links should be used in making up joints in chain, as they seem to be stronger than the other species. On the end of the chain which fastens to the boat, have forged a large link, of sufficient size to be slipped over the bow bit; and, by making fast as illustrated, it is only the work of a few seconds to have the boat moored securely without getting dirty or sliding overboard. In some cases rope may be decided upon the run between the top of buoy and the boat, in which case it is only necessary to pick up ring

with boat hook, make fast the rope by either snap or knot to ring, and let chain fall back into position through buoy. As this mooring rope is generally kept tied to blow cleat or sampson post, the mooring is only the question of making one end fast to the ring which is easily drawn aboard; and the entire operation is easily and quickly done by one man. My experience, however, has shown the chain to be the stronger and cheaper in the long run, with no liability of chafing where the boat is mooring in an open harbor or is subject to the frequent swells created by large boats passing.

It is quite possible that the choice of a keg or barrel for a buoy will not meet with approval, however, having used both this kind as well as the spar buoys, I prefer it as it is handier to make fast to, will not become waterlogged, and with the top bumper overlapping the top of the keg is less liable to damage the boat even if the buoy is overrun. The spar buoy will become waterlogged unless dried out and given a couple of coats of paint every year, and has a tendency to batter and tear off moldings as well as cause more serious damage in case it is overrun by the boat. Also, when a chop is running the spar buoy is slatting around, and it is quite a job to catch hold of the ring on top with a boat hook.

When determining the size or weight of chain, rope, concrete blocks and anchors for any boat, weight in relation to length of boat is the factor to be considered,

(Continued on page 120)



Pick-up Line with Cork Floats for Large Boats

W. E. M. uses bow and stern anchors to good advantage

IMP, A Smart Runabout

Construction Plans and Details for Building a Clever Little Boat Which Is Both Fast and Economical

Designed for MoToR BoatinG

By N. C. CUSHING

AN unusual runabout for the man who wants a fast little boat without a large powered plant. This little job is compact, substantial and at the same time light in weight. The hog sheer line is not often found on small boats, but gives an air of ruggedness to the profile of Imp which seems to make it ready to withstand the roughest sea. Of course we do not mean that this little craft is an ocean liner, but she certainly will be safe in any weather in which any 18-footer should be away from her moorings.

In building a boat of this size it is advisable to locate a suitable building or shed in which the work can be carried on. Before beginning any actual cutting of material it is well to prepare a careful list of the lumber needed in order to have it all delivered in one shipment, and also to permit the lumber to dry out more thoroughly before it is fitted into place. Another essential preliminary consists in transferring to large sheets of heavy paper the lines of the boat from the line drawing. Full size reproductions of every sawn station are made on paper and these are then transferred to wooden molds made of heavier and rougher material. These are the molds which are later spaced at proper distances along the keel and give you the first indication of what your actual boat will look like. The construction molds are erected along the keel assembly and securely stayed in place on the after side of the station point at stations 1, 2, and 3, and on the forward side of those at 4 and 5. The sawn frames are prepared of suitable white oak and cut carefully to dimensions and erected into place. Temporary ribbands are screw fastened in place along the sides of the frame, and serve to hold the structure securely, pending its completion. The steam bent intermediate frames cannot be put in until the sawn frames and ribbands are in place, then the light oak members for this are steamed in a steam box until they are thoroughly pliable. They are removed from the steam box, one at a time, and carried to the hull where they are quickly nailed to the keel and bent around inside, and clamped to the ribbands with screw clamps. As they cool quickly they will retain the bent shape in which they are fastened, and later can be drilled for the planking. The chine members are of yellow pine with a filling block on the inside of each station, to take care of the square corner at this point.

The planking will be of 9/16-inch mahogany and should be carefully cut and fitted into place. The operations for the bottom and for the sides are separate and distinct, since the joint at the chine interrupts the bottom. Since the plank are not of uniform width throughout the boat, it will be necessary to cut and fit each one to its proper position. The bending to suit the shape of the hull will require a shape in the straight board which does not look at all as though it will fit. The method of determining the shape of a plank is called, taking a spiling, which means, measuring the intervals from a curved plate to the edge of the straight template. Beginning at the sheer line, where a temporary batten is secured, a light board is clamped to the frames in such a way that it will be as closely as possible parallel to the sheer batten. Since it may not be possible to

secure one board which will be long enough to cover the entire length of the boat, a rigid joint is made by nailing two boards together. The distances from the sheer batten to this spiling board are then measured by means of a pair of dividers at every station and frame. As the board is removed, a line through these points will be the development of the curved sheer line on a flat board. The board which is to serve as the sheer plank is then cut on one edge to agree with the line taken from the spiling board. The other edge can be made fair, allowing for a slight taper so that the plank will be wider in its central portion where the girth of the boat is greatest. The girth should be measured at points forward, aft, and midships, and this distance divided uniformly so that there will be the same number of boards throughout. Any one plank may have a width of possibly six inches in its central portion, and only

four or possibly less inches at its extremities. The succeeding plank must all be fitted in the same way, taking a spiling from the plank edge previously applied.

The hogging girder shown in the drawing will assist materially in strengthening the hull. It is made from a piece of yellow pine, and fitted carefully into place, and securely fastened at each sawn frame. The clamp and shelf are also fitted and moulded to the hull. The deck beams can be bent to the proper crown, and fitted into place, after which the cedar decking can be applied. Our hull is now nearing its completion and there remain numerous details of finish to be taken care of. Such trim as appears about the cockpit opening, and around the seats, bulkheads, and other points, can be made and fitted to suit individual re-

quirements, and such items as gasoline tanks, rudder posts, and other similar items which are built into the hull and closed in, must be fitted and secured before the trim is fastened.

The foundation for the engine should also be cut and fitted into place before the boat is enclosed, so that it will be accessible. Possibly it would be just as well to drop the engine into place before the deck is applied. It is much easier to lift the engine when one has clear sailing, than when it is necessary to twist and turn the machine while it is suspended on a tackle and try to steer and lower it into place at the same time.

Before the closing in of many of the spaces which will be inaccessible after completion, it will be necessary to apply a coat of hot linseed oil followed by a coat of good lead paint. All seams in the planking should also be caulked as they are made by rolling in spun cotton, and then filling the seam with good seam composition. The outside of the hull when completed should be carefully smoothed down and sanded, after which it may be stained to give a uniform color, and followed by several coats of good varnish carefully rubbed down between each, so as to secure the smoothest possible finish.

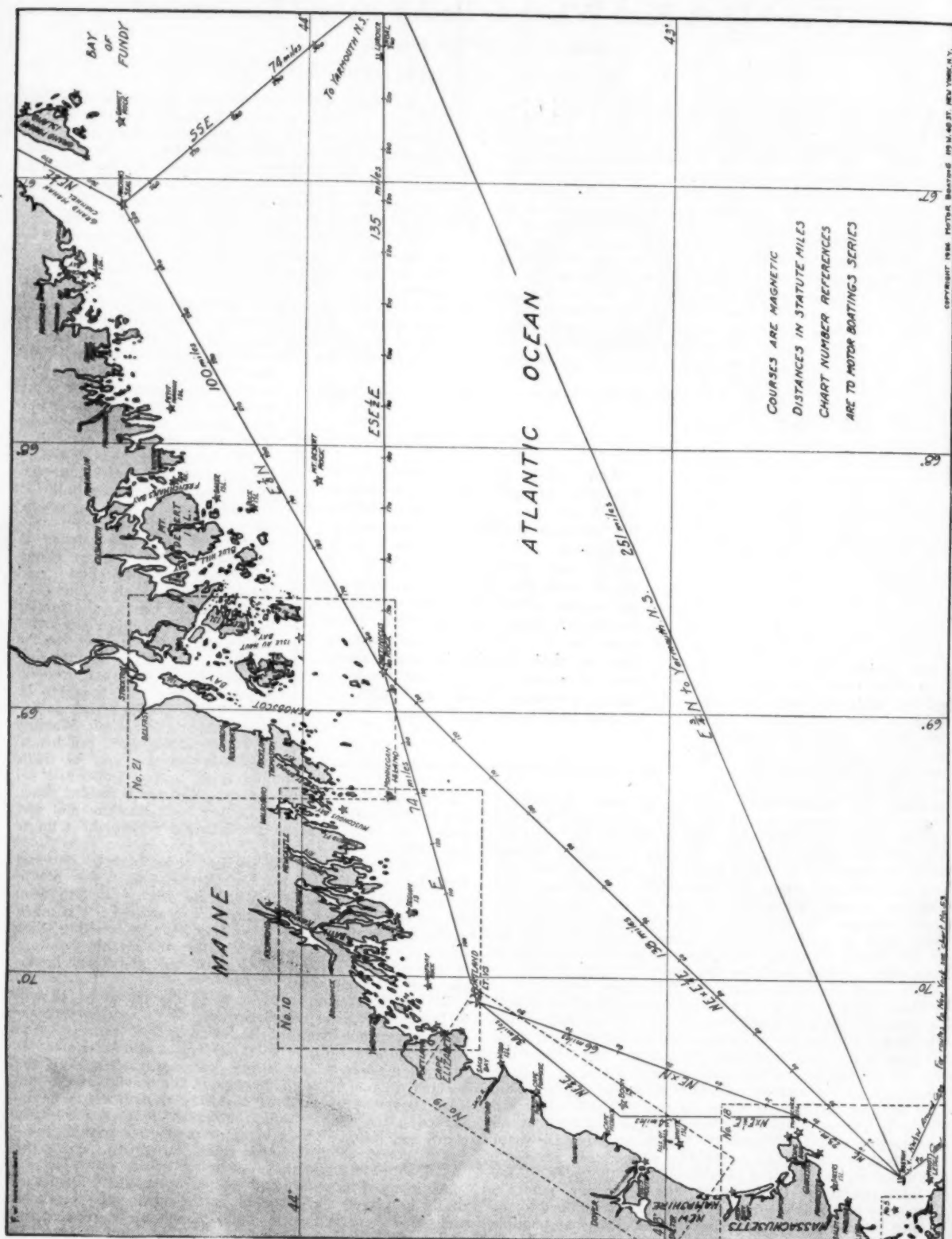
All items of hardware and equipment called for must naturally be placed and installed, as the opportunity presents, and since there is a wide choice of suitable equipment the choice will be left to the individual. (Continued on page 74)

A SNAPPY RUNABOUT

These plans call for a clever little runabout of only 18 feet in length, which can be easily constructed by the amateur builder and also easily equipped. It is a smart little boat which can probably do about 11 m.p.h. with the little 12 h.p. Universal engine which has been specified. It should make an excellent little boat for the younger generation to take up their boating in, and a number of young fellows could spend many pleasant hours on board a dandy little craft such as this.

Motor Boatman's Chart No. 54, Boston to Eastport

Use in Connection with MoToR BoatinG's Chart Series and Route Description



Where to Cruise

Extension of the Route Described Under Cruise No. 9, New York to Boston, to Include the Entire Coast of Maine as Far as Eastport

NO real cruiser who ever gets as far east as Boston will neglect the opportunity to explore the wonderful cruising possibilities of the Maine coast. This section of the United States offers the most attractive and picturesque cruising ground of any part of the entire seaboard. For the stranger in these waters some words of caution and advice will not be amiss. Due to the rocky and irregular coastline, it is always essential to be certain of the vessel's position and keep a good look out for rocks, and ledges, which abound. Another pronounced danger frequently met along this section of the coast is the extremely sudden and heavy fog. This is liable to set in at any time, often without any warning. It is frequent during the months of June, July, and August, while May and September are not entirely free of it. At times when it is exceedingly thick outside, it is comparatively clear at the heads of the bays and within the rivers. Fogs can generally be looked for when the wind swings from east to southwest by way of south, and clear weather is the rule when the winds are from the west and northerly quadrants.

Another factor which makes navigation along this coast somewhat of a hazard, is the strong tidal currents which are experienced. If, when cruising along this coast a fog suddenly shuts in, and one of the off shore light houses is not located when it should be, the best thing to do would be to try and locate it, or else keep well off shore until it clears and a position can be more definitely found. To the east of Sequin Island, except to the south and east of Grand Manan Island, land will always be sighted in clear weather before any outlying dangers are encountered. By keeping three miles outside of the head lands and outlying islands, all unmarked dangers will be cleared.

In leaving Boston Harbor there is a wide choice of courses to follow in order to reach the furthest eastern point in the United States. For the smaller craft a course which follows the coastline to a greater or lesser extent will probably be the most suitable. Naturally, a small boat is not provided with a large enough crew to permit of day and night running, and it will be desirable to put into one or another of the many excellent harbors with which this coast abounds. Also the pleasure cruiser will not wish to hurry over any part of this coast, as it is all so wonderfully picturesque and worth seeing. Many of the bays along this coast are worth a week or two of time each, and it is hard to lay out any kind of a definite schedule with any hope of being able to keep to it.

We have before we get very far on the journey, the old historic port of Portsmouth, N. H. This is the seat of one of the large naval bases, and has considerable historic interest. Further along we get to the first point in Maine, and this is the city of Portland, the principal maritime harbor in this state. There are several entrances to the

harbor between the islands, some of which are marked. Numerous ledges and rocks make the approach dangerous in thick weather, especially to vessels of deep draft. In clear weather the entrance is easy, as all dangers are marked by buoys. Casco Bay is just a little further to the east, and is dotted with many islands of all sizes. It is, roughly, about 17 miles in width, and 12 miles north and south. The shore is very irregular, and much obstructed by rocks and ledges. The general trend of the islands and ledges being NE and SW. Strangers in these waters should navigate with great care and not attempt to get into places which are shown on the charts as being rocky and un-navigable.

The course for the through traveller has been laid off sufficiently far out at sea to clear all of the coastwise dangers. From Portland

Light Vessel a through run of 74 miles will bring us to Matinicus Rock Light. Along this portion all of the numerous harbors are available, and the choice of which to explore and where to put in is unlimited. Penobscot Bay is at the entrance to the Penobscot River and is a large bay on which many of the prominent cities are located. Rockland is close to the entrance, and Rockport, Camden, Belfast, Bucksport, Winterport, and Bangor, follow in order all the way up the river for a distance of 75 odd miles. The Isle au Haut Bay is an easterly arm of the Penobscot entrance, and many of the prominent resort centers of Maine are here. Vinal Haven Island and Deer Island are on both sides

of this bay, which is easily accessible. Further along we pass between Duck Island and Mt. Desert Rock, with Mt. Desert Island and Bar Harbor as the most prominent points on the shore. Beyond this point the state is less populous, although there are many small cities on all of the indentations of the coast. Machias Seal Island is a prominent light directly in our course, and on leaving this we can swing decidedly more to the north and pass between Grand Manan Island and the main land. After leaving West Quoddy Head Light, our course continues around Campobello Island, and into Eastport Harbor. The city of Eastport is located on the southeastern of Moose Island. It is a center of the lumber and fishing industries. The best anchorage is off the custom house where the current has the least strength.

For larger and more powerful cruisers, who might hope to continue the journey to Nova Scotia, a SSE course for 74 miles from Machias Seal Island will bring you to the entrance of Yarmouth Harbor, Nova Scotia. For those who might wish to reach Yarmouth more directly, there are direct courses which can be followed from Matinicus Rock for 135 miles, and for the real large vessels which can make the journey directly from Boston, a single stretch and a straight course of E $\frac{3}{4}$ N for 251 miles, will take us directly into Yarmouth Harbor.

Cruise No. 10--Boston to Eastport, Me.

	Coast & Geodetic Survey Chart Nos.	Distance Between Boston	Total Miles From Boston	Total Miles From Eastport
Boston Light Vessel.....	1207	—	—	295
Thacher Island	1206	23	23	272
to Portsmouth, N. H. 34 miles				
Portland Light Vessel.....	1205	66	89	206
to Portland, Me., 13 miles				
Sequin Island.....	1204	19	108	187
to Bath, Me., 23 miles				
Monhegan Island.....	1203	23	131	164
to Thomaston 30 miles				
to Rockland 28 miles				
Matinicus Rock.....	1203	23	154	141
Penobscot River to Bangor 75 miles				
Mt. Desert Rock, Duck Island. to Bar Harbor 25 miles	1202	37	191	104
Pett Macon Island.....	1201	25	216	79
Steels Harbor Island.....	1201	18	234	61
to Machias Bay 18 miles				
Machias Seal Island.....	1201	19	253	42
West Quoddy Head.....	1201	23	276	19
Eastport	1201	19	295	—
To Yarmouth, N. S. (Cape Fourchu), from Machias Seal Island 74 miles.				
To Yarmouth, N. S. (Cape Fourchu), from Matinicus Rock 135 miles.				
To Yarmouth, N. S., from Boston Light Vessel, direct course, 251 miles.				

Are The Government Requirements Driving You From Boating?

How Some Local Inspectors and Officials Attempt to Enforce Illegal Rulings of Their Own Making—Motor Boatmen Advised to Obey The Few Simple Federal Laws But Not to Stand Annoyance by Unauthorized Regulations

ON page 14 of this issue, we have said a few words in reference to the equipment which the government requires that all motor boats have on board whenever they are under way on Federal waterways. As the requirements are so few and the rules so simple, we particularly ask that everyone read the article. We have also mentioned numbers for motor boats as well as the users' tax, both of which subjects are relevant when speaking of government requirements.

At this time of the year, when most boats will go into commission within the next thirty days, we should like to urge strict compliance with the motor boat equipment law. The few articles which we have mentioned as being required to be aboard one boat are not expensive to buy or burdensome to carry. They are all for the safety of ourselves, our guests and our crew. Motor boating is in no sense a dangerous sport, but a little precaution for safety's sake is always worth while.

In the enforcement of the government equipment laws, everyone should feel that nothing but the friendliest feelings exist toward the motor boatmen among those of our government officials charged with the enforcement. When the equipment law was passed, it was a committee of motor boatmen who made the very suggestions which Congress enacted into a law. The same law stands today without any change having been made in it in fourteen years. It was good then and is still as near perfection as it is possible to make it.

The branch of our government which has jurisdiction over motor boats is the Bureau of Navigation of the Department of Commerce. The Honorable D. B. Carson is Commissioner of Navigation and the Honorable A. J. Tyrer is Deputy Commissioner. Both of these officials have the highest regard for the motor boatmen of the country. They are constantly striving to make conditions afloat more enjoyable for motor boatmen. Contrary to the general opinion, these two officials have done more to kill legislation hostile to motor boat interests which has been introduced into Congress, than any group of interests or delegations from yachting or business organizations or congressmen themselves. Hardly a year passes but that one or more (and generally several) bills are introduced in Congress, some of which, if passed, would almost legislate the motor boat off our waters. But seldom if ever does the proposed leg-

islation get the approval of the Bureau of Navigation, making it lack, therefore, the necessary something to have it pass Congress.

To assist the Bureau of Navigation in the enforcement of the motor boat laws regarding equipment, they own a few motor boats of which the Tarragon and Siwash are best known. These enforcement boats cruise up and down our coast once or twice a season keeping watch for violations of the equipment law. Many of you, we feel quite certain, have met the officers of these boats and no doubt have found them to be very human individuals, courteous to motor boatmen and ready to co-operate at all times. Their tasks are not the easiest in the world but on every occasion, their actions reflect the friendly feeling of their superiors at Washington toward the motor boatmen.

The personnel of the Bureau of Navigation, which can be used for the enforcement of the motor boat laws, is very limited in size and not nearly sufficient for the purpose. For this reason, the Bureau is obliged to call upon another branch of our government for assistance, not only in the matter of equipment but in the assignment of numbers for motor boats which duty also comes under the jurisdiction of the Bureau of Navigation of the Department of Commerce. The branch which is made use of for these purposes is the Collectors of Customs.

As everyone knows, there are offices of the Collector of Customs in all of our principal ports. All of these offices therefore can be and are used to carry on the motor boat work of the Bureau of Navigation at Washington. At these offices, numbers may be obtained and the employees in many instances have power to make inspections of motor boats to see if the proper equipment is on board.

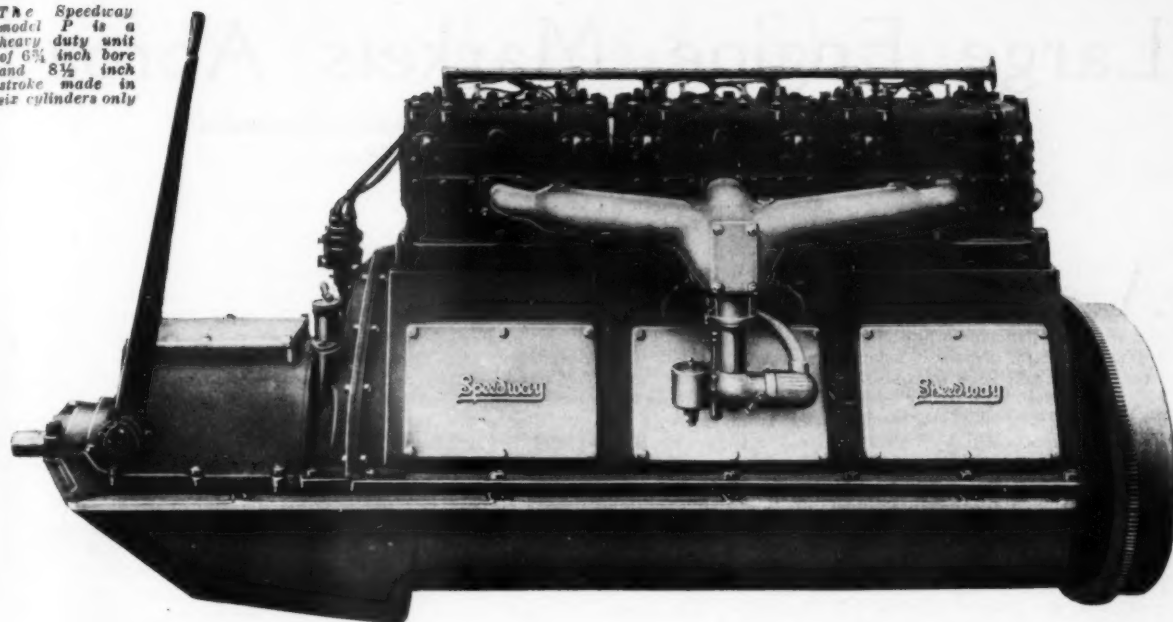
While we urge a strict compliance with the motor boat laws, it is equally important that every motor boatman see to it that his rights are not violated by any of the local government officers or inspectors. It has been brought to our attention quite frequently recently that many of the violations are on the part of the officials themselves.

The requirements of the equipment laws are few and simple. They are fully enumerated on page 14. No government department or officer has the right to require more of the motor boatman. There is nothing in the law which any motor boatman should fear. There is no legislation or government requirements which (Continued on page 152)

DATES OF IMPORTANT CHAMPIONSHIP RACES

- July 3-6—Annual Regatta, Mississippi Valley Power Boat Association, Oshkosh, Wis. A. T. Griffith, Secretary, Peoria, Illinois.
- July 3—Middletown, Conn. to Sachems Head, Conn. Classes for cruisers and express cruisers. Minn S. Cornell, Jr., Middletown, Conn.
- July 4—Sachems Head, Conn. around Falkners Island and return.
- July 5—Sachems Head, Conn. to Lloyd's Harbor, Long Island. Classes for cruisers and express cruisers. M. S. Cornell, Jr., Middletown, Conn.
- July 12—New Rochelle to Block Island, New York Athletic Club, open to cruisers. E. H. Tucker, Chairman, 110 William St., New York City.
- July 31—Long Distance Ocean Championship for James Craig Trophy, Columbia Yacht Club, New York City to Shelter Island, Long Island. C. F. Chapman, Chairman, 119 West 40 Street, New York.
- July 31—Mamaroneck, N. Y. to Shelter Island, L. I. Cruiser race for MoToR Boating Trophy. Open to cruisers 25 feet to 70 feet. L. W. L. W. Roy Halsey, Chairman, Mamaroneck, N. Y.
- August 2—Handicap Cruiser Championship of America, Shelter Island, N. Y. Open to cruisers 30 to 45 feet L. W. L. W. Bradford, Chairman, 154 Montague St., Brooklyn, N. Y.
- August 8-15-22—National Trophy Race, Lake George, New York. Lake George Regatta Ass'n., R. E. Henry, Chairman, Hague, N. Y.
- August 14-16—Annual Regatta of Buffalo Launch Club, Buffalo, N. Y. Arthur J. Utz, Chairman, 887 Niagara Street, Buffalo, N. Y.
- August 29-Sept. 1—Annual Gold Cup Regatta, Detroit Yacht Club, Detroit, Michigan. W. D. Edensburn, Chairman, Hotel Addison, Detroit, Mich.
- March 20-21, 1925—Annual Southern Regatta, Miami Beach, Fla. Championship Races for Hydroplanes and High Speed Runabouts. Carl G. Fisher, Chairman, Miami Beach, Florida.

The Speedway model P is a heavy duty unit of 6 3/4 inch bore and 8 1/2 inch stroke made in six cylinders only



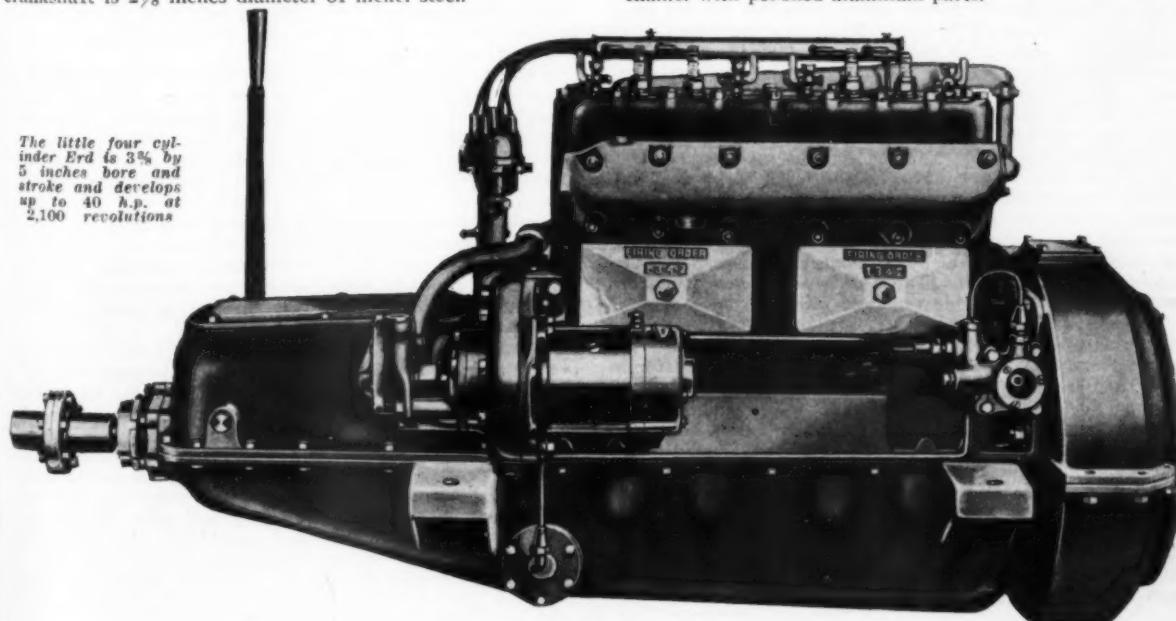
NEW ENGINES with A Purpose

An efficient and practical engine of the L head, heavy duty type, has been designed by the Consolidated Shipbuilding Corporation for the particular needs of the moderate speed cruiser in which a quiet running engine of from 400 to 600 revolutions is wanted. This machine is built with the cylinders in pairs, while the water jackets are cast integral with the cylinders. The frame is a single heavy casting, strongly webbed, which insures a rigid construction, and the bed plate is a single piece of cast iron, with an extension for the clutch and thrust bearing. Seats for the main bearing are machined and fitted with removable bronze babbitted shells. The crankshaft is 2 7/8 inches diameter of nickel steel.

Differing in Size and Capacity, Recent Developments of The Marine Engineer are Ready to Propel Suitable Craft Either Fast or Faster According to Their Capacity

This smaller machine made by the Erd Motors Corporation, is intended for smaller and faster boats, and for its 179 cubic inches of piston displacement it develops up to forty horse-power at 2,100 revolutions. Built into this machine are many essential qualities. The materials and workmanship are there. Freedom from vibration is due to the substantial construction and the wonderful balance of the parts. Provision has been made at every wearing point so that it can be compensated for and bushings and take-up shims are provided. The crankshaft is drilled for force-feed lubrication, and every moving part is entirely enclosed in an oil-tight housing. The finish is a grey high gloss enamel with polished aluminum parts.

The little four cylinder Erd is 3 3/4 by 5 inches bore and stroke and develops up to 40 h.p. at 2,100 revolutions



Large Engine Markets Abroad

Foreign Countries Offer Suitable Fields for American Expansion
and Require Only Aggressive Sales Effort

By A. W. PAYNE

A GOOD market for American marine engines awaits some progressive manufacturer among the fishermen of Spain. The shore people of this country are all great fishermen, and the fishing fleet has been large for many years. Spanish fishermen, who rely on sail and oar to get to and from the fishing grounds, are just awakening to the advantage of the motor over either of these two. Their smacks, open craft, range in size from 12 to 45 feet long, and are pulled by crews of from 2 to 20 when the breeze fails.

The *traineras*, as their boats are called, are admirably fitted for installation of engines, being sturdy, shallow, round bottomed craft. Among a fleet of 1,100 in the district around Vigo, there are only 35 engines now in use. The demand for auxiliary power for the *traineras* is growing, and, while a rapid demand can not be expected, the growth of the use of engines will be steady. The fishermen are conservative, must be shown before they will buy, and are not financially able to buy during every season of the year.

American engines are favored. While five or six German motors and three or four Swedish have been sold in this market recently, a dealer handling Yankee products who sold twenty engines last year, expects to sell thirty this year.

Sturdy, simple and speedy engines are wanted. Strength is desired because the motors will receive hard service; simplicity because the possible buyers know little or nothing about machinery; and speed because there are always races among the fishermen to be first to market. Two to four cylinder, four cycle motors, ranging from eight to twenty-five horsepower are preferred, the power ranging according to the size of the *traineras*. Single cylinder engines are not liked because of excessive vibration. There is a tendency toward the fuel oil engine of at least two cylinders, because, while recent sales have been of gasoline types, gas at 32 cents per gallon is expensive.

So far the gasoline motors of a well-known American firm have composed the greater part of the sales in the Vigo district, and have given general satisfaction. No American oil engines have been offered yet. German, Dutch and Swedish motors have also been seen on this market, but very few of the first have been sold. It is complained that they are not uniform, one doing well while another will do very badly, so that they have not given any great satisfaction. The Dutch and Swedish motors were said to be good but too high priced.

Besides the *traineras* there are other craft offering chances for engine sales. Of vessels less than fifty tons gross there are in use in this district a number of freight carrying sail craft none of which as yet have auxiliary power. There are 216 fishing steamers averaging about 59 tons gross and new ones constantly being built that could also be motorized were the builders educated in the advantages of the gas or heavy oil engine. At present there is no tendency toward substituting the motor for the steam engine in either old or new craft because the engines and boilers are known for their reliability and the people know how to run them. Also, coal is comparatively cheap, the engines are manufactured locally, and are therefore

somewhat cheaper than imported motors.

The outboard engine is practically unknown generally, because it is too small for the local commercial purposes, and pleasure boating, despite splendid opportunities is little indulged in. There are a few launches for passenger traffic and pleasure use, for harbor officials and steamship agents. Some of these are propelled by steam.

There are now eleven marine engine agents in Vigo, and they are beginning to advertise. One agent even advertises an announcement when an engine is to be installed in a locally built boat and invites public inspection of the boat. There is a public gathering, too, when the trials are made. Because the fishermen have small capital deposits are made low, terms are liberal and strung out for long periods, as long as a year and a half sometimes.

AUSTRALIA

The Southern Continent is a good example of what American engine manufacturers have not been doing in recent years. They had a good market here before the war, which has dwindled considerably since. Yet this has not been their fault entirely, and there is still seen a good market for motors and marine accessories for them.

Until the outbreak of the war there had been an increasing interest in motor boating as a sport. The war broke in, of course, and only in the last year has the sport found any considerable revival. The advantage in this market was then on the American side, because of attractive prices, prompt de-

liveries, wide range of models and agents carefully chosen for vim and enthusiasm. The British manufacturers had no local agents, made no arrangements for carrying spare parts and maintained very high prices. Now, the situation is exactly reversed, owing possibly to the falling off in demand during the war.

While American agencies have not been reestablished, the Britishers have displayed keen interest in the field, have brought down their prices nearer to competitive bases and now stress their service features. The British motor is now thought to have the advantage over the American product because it is credited with being a more durable article.

Customs duties naturally favor the British article. While engines from America or other countries are subject to 40 per cent ad valorem, it is only 27½ on British engines. Completely equipped motorboats from countries other than Britain pay 35 per cent ad valorem duty, as against 25 per cent on English products.

There would seem to be practically no market for complete boats fitted with engines, because of the duty and high freight rates. With one or two exceptions there have been no such boats imported for twenty years for these reasons. While the market in the waters neighboring Victoria, owing to certain local conditions, is restricted as far as pleasure craft are concerned, in comparison with other localities, there is, on the other hand better opening for small power units for use in fishing and other commercial boats. The markets in South and West Australia are limited to auxiliary engines for fishing smacks.

Though Victorian waters are (Continued on page 122)

NEW MARKETS WAITING

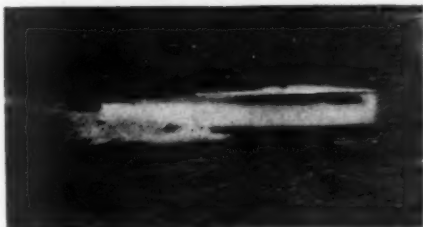
In Spain the fishermen and small boat operators have not yet been educated to the advantage of gasoline over steam plants. Australia, likewise was an excellent market before the war but the British manufacturers dominate it today. These large potential markets for American manufacturers await the aggressive onslaught of enterprising salesmen and can be had for the effort.—Editor

Yard and Shop

Notes of Interest to Both Owner and Manufacturer

A Runabout from MoToR Boating's Plans

IN ORDER to meet the popular demand for a small easily handled runabout of modern design and equipment, The Brooks Boat Company, Inc., of Saginaw, Michigan, have started production on a standardized 22½-foot sport runabout to be built according to the designs of the runabout Fleetfoot by John L. Hacker, which appeared in MoToR BOATING a year or so ago. This little boat will be well built in every way and makes a most attractive, seaworthy and dependable craft. The boat will be completely equipped and arranged to seat five persons comfortably. Its construction will be of the highest grade materials throughout, and it will be fitted with all necessary requirements for comfort and safety. It is to be powered with the new four cylinder Erd enclosed marine engine, which is also arranged with a complete electric starting and lighting system.



Princess, a little 1 1/2 litre class runabout owned by Wm. Macho of Oshkosh which does 21 miles with a Universal engine

Great Lakes Open Eastern Office

We have been advised by the Great Lakes Boat Building Corporation that Clifford Sloan has been associated with the company in full charge of the Eastern sales territory. This connection will do much to further the prestige of Great Lakes' boats on Eastern waters, as Mr. Sloan is exceedingly well known and both he and the Great Lakes Company are to be congratulated on the arrangement. In this connection it might also be mentioned that J. E. Roberts, formerly Vice-President of the company has withdrawn from the organization.



Eureka II, a 72-foot boat owned by the Se-Bot-M Co. of Florida, carries sightseers to the sea gardens. This boat is driven by two D-6 Scripps engines and is carried on pontoons 10 feet apart

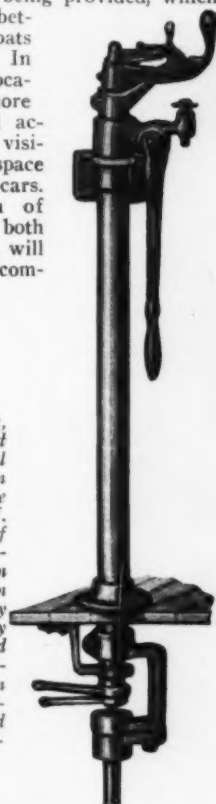
This engine is designed to deliver from 20 to 35 horse-power, and altogether the boat should prove to be one of the most attractive little craft on the market today. Any one interested can obtain full particulars from the Brooks Boat Company at Saginaw.

A New Catalog

The Geo. B. Carpenter Company of Chicago, makers of all manner of marine supplies, motor boat accessories, and camp equipment, have issued a new catalog describing their products for the year 1924. This has been corrected right up to the minute, and is a very useful book for any who have much purchasing to do of equipment such as is described. We are quite certain that if any of our readers will send a request for a copy to this company, it will be mailed to them promptly. As this book is quite expensive, it is not possible to distribute them broadcast, but they will be sent wherever they are needed.

Marine Engine Center of Chicago

Having out grown their old quarters in Chicago, W. L. Masters & Company have just opened new sales rooms in the Bush Temple Building, 800 North Clark Street, where they will be able to properly display their complete line of boats and engines. Additional shop facilities are also being provided, which will allow of better service to boats and engines. In addition the location is much more convenient and accessible so that visitors can find space to park their cars. Their selection of marine engines both new and used will be unusually complete.



A new spark, throttle, and clutch control which has been developed by the Hubbard H. Erickson Co. of Chicago, to simplify one man control. It can be installed easily and is entirely of brass and bronze. The reverse lever can be held horizontally or folded down when desired

Outboard Engines Move Fast

Interest in outboard motor boating is growing so rapidly that the Evinrude Motor Company of Milwaukee has found it necessary to seek larger quarters for its eastern sales branch. This is now located at 115 East 23 St., New York, N. Y., and it has already consumed its second carload of Evinrude outboard motors so far this season. These engines are distributed through the dealers in this territory to the sportsmen and out door men of New York and adjacent territory.

Red Wings Show Results

It is a peculiar coincidence that the coaching launches for the rowing crews of both Yale and Princeton Universities have been fitted with Red Wing Thorobred engines. The performance of these machines has been so consistent and satisfactory that letters have been written to the company in commendation of these machines. That from J. Duncan Spaeth, Director of Rowing at Princeton reads as follows: "The Red Wing engine shipped to us last week has been installed, and is giving the best service we have ever had. If the engine continues to give the satisfaction it has so far, I shall recommend the installation of

NUTTING GOES ABROAD, ATKIN JOINS MOTOR BOATING

W. W. Nutting for several years editor of our contemporary Motor Boat, has resigned and sailed for Europe where he is to do considerable small boat sailing, so it is announced, in the interest of a general magazine. MoToR Boating wishes Mr. Nutting the best of success in his new field.

a Red Wing in the new launch we expect to have next year." Similarly the note from H. F. Woodcock, General Manager of the Yale Athletic Association, also speaks well of the Red Wing engine. He writes: "We have found that the Red Wing Thorobred engine which we purchased some time ago for one of our crew coaching launches is exceedingly serviceable and satisfactory and, when it became necessary to purchase a new engine for another launch recently, the Red Wing was the only one we cared to consider, in view of the excellent performance of the one which we have had in service some two years."

Elto's New Pump

The 1924 Elto has no mechanical pump—yet it has the most perfect system of water cooling ever incorporated in an outboard motor. Through propeller pressure, the water is forced through two scoops or channels in the rudder. These two channels converge into a single channel at the upper end of the rudder through which the water continues its course up through a hollow tube in the rudder yoke. This tube also acts as the rudder pin and then terminates in a Y connection from which point the water is piped direct to both cylinder jackets. The water overflow pipes are formed in the shape of coils, making it possible to utilize about fifty inches of copper tubing. The volume of water passing through this outlet tube is of sufficient weight to create a syphon enabling the system to operate at slow speed, when the pressure from the propeller is very low.

The openings in all these pipes are large, with generous curves and no sharp edges in which sand, dirt or sediment of any kind could lodge. The water flows freely through the entire system with nothing to cause an obstruction of any kind. A screen near the mouth of the opening prevents weeds and other foreign matter from clogging the water system.

The propello-pump has completely eliminated all of the aggravating



Madin, a V-bottom cruiser, owned by W. C. Stone, of Watertown, Wis. This boat is 45 feet in length and is equipped with a model E-6 Scripps engine which drives her between 15 and 16 m.p.h. She is used extensively on Lake Superior

troubles which the mechanical pump has given rise to, such as sticking of valves, weakening of pump springs, wearing of pump plunger, particles of dirt holding up the check valves, necessity of reseating check valves; in fact, the propello-pump operates perfectly under sandy, muddy or salt water conditions.

The propello-pump has been put through the most rigid tests under every conceivable condition and it has proven to be the most perfect, the most practical and effective water cooling system possible for adaptation to the outboard motor.

Caille Motor Sales Branches

A new sales plan has been adopted by the Caille Perfection Motor Company in order to take care of their trade more promptly. Sales branches have been established in different sections of the country where complete stocks of motors and parts will be carried. Up to the present time the following branches have been opened and equipped with complete lines of Caille machines: Leslie Franks, 5100 N. Bernard St., Chicago, Ill.; Fremont Electric Co., 742 N. 34th St., Seattle, Wash.; E. J. Willis Co., 85 Chambers St., New York City; Weeks-Howe-Emerson Co., 90 Market St., San Francisco, Cal.; James Walker Company, 123 Light St., Baltimore, Md.; and J. J. Odenwald, 1209 H St., N. W., Washington, D. C. Additional branches will be open from time to time in other sections, since it is the aim of the company to cover every part of the United States.



Miss Julia, a 19-foot Jersey flyer designed by Hacker and powered with a New Jersey 24 h.p. engine. This boat was built by Fred Jacoby of Homestead, N. J., and has developed a speed of 22 m.p.h., and was successful in winning all races in the Hackensack River Association

water use, has just been announced by the Evinrude Motor Company of Milwaukee, Wis. This new model differs from the standard Sport Twin in that the propeller, propeller sleeve, and gear-house cover are made of bronze which better resists the corrosive action of salt sea water. Although this change in construction adds a few pounds to the weight of the motor, this is more than offset by the longer life of the new Sport Twin in salt water. This salt water model is being offered at the same price as the regular light weight Sport Twin model.

A Graceful Sloop

A dandy little sloop of 18-foot overall length has been designed by John G. Alden and is being built and sold by the Baker Yacht Basin, Inc., Quincy, Mass. This little boat is built of selected materials throughout and is a most wonderful plaything for any man or



The 32-foot Red Bank cruiser is a fast and seaworthy job. When equipped with a powerful engine, speeds up to 17 and 18 m.p.h. have been attained

boy who likes action. For those who prefer a test of speed, strength, and skill afloat to any sport ashore. Her qualities have been proven on the open ocean and she is rigged for strenuous service. She carries 200 square feet of canvas, just the right amount for thrilling sport and safe going. If auxiliary power is wanted, an outboard motor can be quickly adapted.

Of Interest to Racing Skippers

There has long been a demand for a soft yet super-strong Yacht Rope. from the yachtsman not contented with Manila or Italian Hemp.

Geo. B. Carpenter & Co. have for several years been searching for just such a rope to offer in conjunction with their well known racing sails.

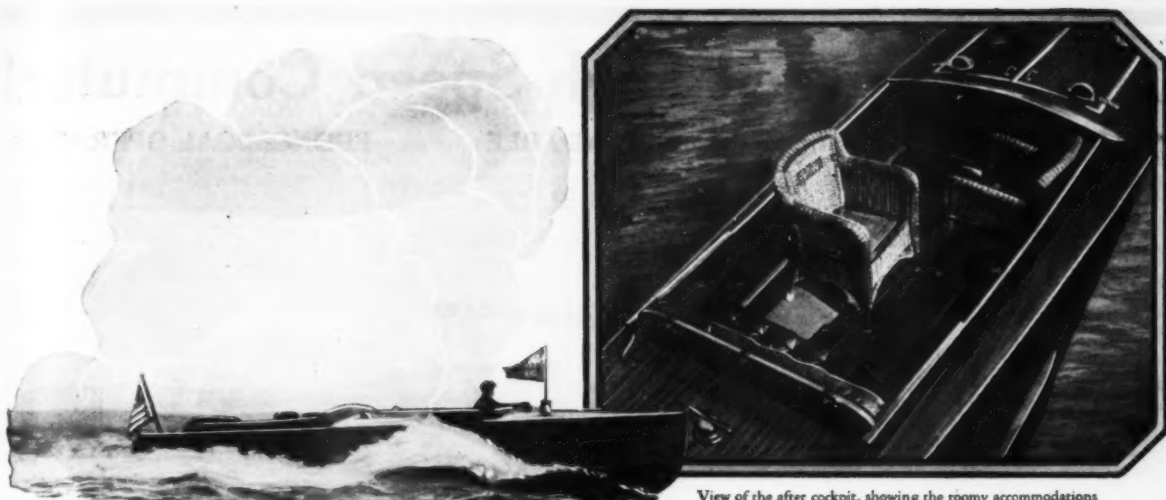
Spark Plugs Undergo Severe Test

In writing to the Robert Bosch Magneto Company, recently, William F. Daley, Chief of the Brockton Fire Department, commended the work of these plugs at a recent fire in Hanover, Mass., in which his apparatus was engaged.

(Continued on page 68)

New Evinrude Sport Twin

A new Sport Twin, specially adapted for salt



View of the after cockpit, showing the roomy accommodations for passengers on the Packard Runabout.

The New Packard Runabout is Valsparred, of Course!

They call it a "quality combination"—the new Great Lakes Packard Runabout. And it's all of that! For this superb runabout has a Packard marine engine in a de-luxe hull made by the Great Lakes Boat Building Corporation.

Specifications call for a striking appearance—cedar planked bottom and mahogany sides with fittings of highest order. Regarding the surface finish, let us quote a Great Lakes official:

"This is a beautiful runabout, and its finish is second to none. Needless to say it is varnished with Valspar. Nothing has been spared to make it a quality job throughout."

It is a fact, the finest boats everywhere are Valsparred. Owners, builders and boat fans know that for protection against salt spray, grease and oil, against wear and weather in general, the best all-round varnish is VALSPAR.

This coupon is worth 20 cents to \$1.20

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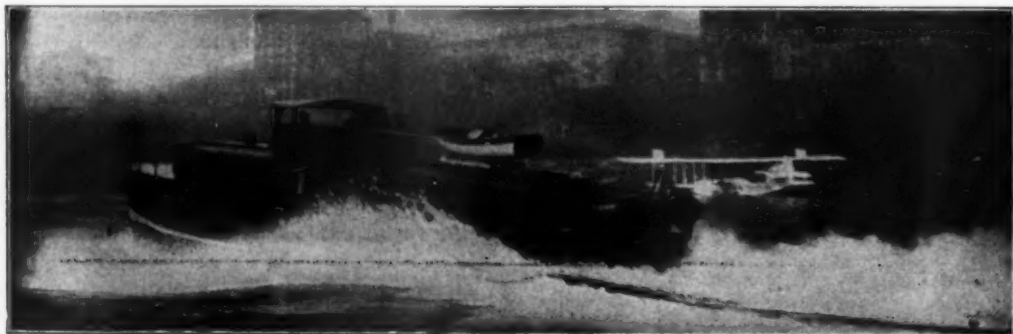
COMMUTE BY WATER!

Save time by traveling back and forth from your Summer home aboard a GAR JR. FLYER. Avoid the heat, dust and inconvenience of commuting by motor or rail.



The roomy bridge deck and forward cockpit seat 12 persons

Power plant consists of two twin-six "Liberty" motors developing 450 H.P. each, perfect in balance and control, absolutely reliable, and practically automatic in operation.



GAR JR. II completing record-breaking run from Miami to New York (outside route) 1260 miles at sea in 47 hours 23 minutes running time (21 min. less than schedule train time of famous "Havana Special")

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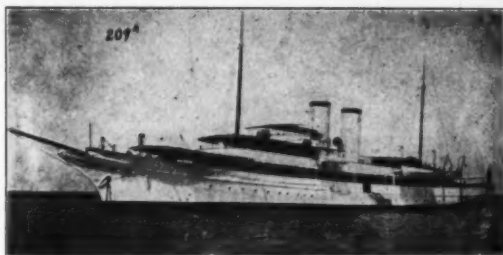
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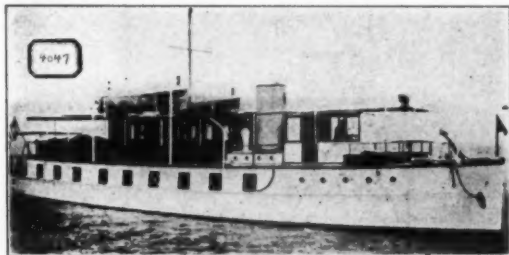
On this page are shown a few representative yachts selected from our large lists. Should none appeal kindly acquaint us with your requirements. Full information regarding costs to build, purchase or charter yachts of all types gladly furnished.



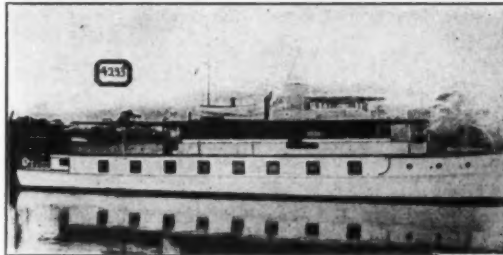
No. 4164—For Sale—Up-to-date 93 ft. twin-screw cruising motor yacht. Built 1921. Construction unusually heavy and of highest class. Speed 12 to 14 miles; two 80-115 H.P. Winton motors. Dining saloon in deckhouse forward; two double and one single staterooms, bath and two toilets below aft. Able, handsome, comfortable cruiser. Interior finish mahogany and ivory enamel. Cox & Stevens, 25 Broadway, New York.



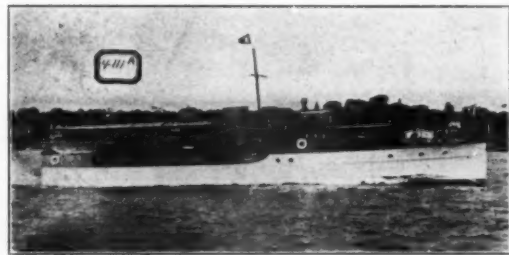
No. 209—For Sale or Charter—Large, sea-going steam yacht. Palatial accommodation. Unusual opportunity. Several similar larger and smaller available craft. Cox & Stevens, 25 Broadway, New York.



No. 4047—For Sale or Charter—Twin screw motor houseboat, 85' x 18' x 3.3' Winton motors. Four staterooms, two baths and three toilets below. Deckhouse 25' long, containing combination dining saloon and living room. Luxuriously fitted and furnished. All conveniences. Cox & Stevens, 25 Broadway, New York.



No. 4233—For Sale or Charter—Practically new, twin screw motor houseboat, 100 ft. x 20 ft. draft. Speed 10-11 miles. Exceptional accommodation includes five staterooms, three bath and toilet rooms. Dining room and library in deckhouse. Tastefully furnished throughout. Large deck space. Best large houseboat available in Florida waters. Cox & Stevens, 25 Broadway, New York.



No. 4111—For Sale—Modern, twin-screw motor yacht, 73' x 12'-9" x 4'. Built 1921. Speed up to 15 miles, two 6 cylinder 175 H.P. Sterling motors. Dining saloon, two double staterooms, bath and toilet room. Enclosed bridge. Excellent condition. Price reasonable. Cox & Stevens, 25 Broadway, New York.



No. 2758—For Sale—Exceptionally roomy power yacht; 65 x 13 x 3' 6" draft. Speed 10 miles; 65 H.P. 20th Century motor. Accommodations include double and single staterooms, saloon with two transom berths, bath and toilet room aft; dining saloon in deckhouse forward. Deck space unusually large. Independent electric light plant. Cox & Stevens, 25 Broadway, New York.



No. 3944—For Sale—Twin-screw cruiser; 60 ft. x 12 ft. x 3 ft. 7 in. draft. New 1920. Speed up to 14 miles; two 50 H.P. Sterling motors. Stateroom, saloon, bath and toilet, galley, etc. Price attractive. Cox & Stevens, 25 Broadway, New York.



No. 2830—For Sale—Attractive 50' bridge deck cruiser in excellent condition. Two cabins, large afterdeck. Equipped with 50 H.P. heavy duty motor. Speed 11 miles. In commission. Cox & Stevens, 25 Broadway, New York.



No. 4314—For Sale—40' V bottom, bridge deck cruiser. Excellent seaboot and very well constructed. Speed up to 15 miles. Large deck space with enclosed bridge from which motor is controlled. Price attractive. Cox & Stevens, 25 Broadway, New York.

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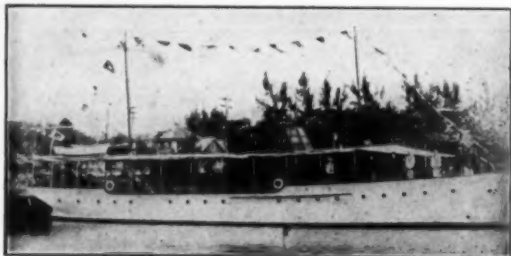
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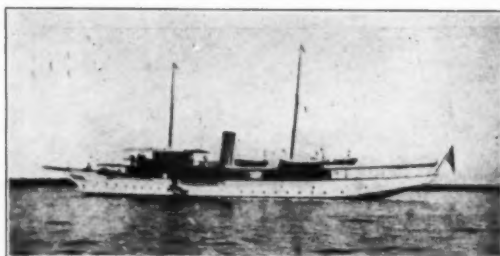
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No. 7866—For Sale—Best purchase for quality at reasonable price. 93' x 18' x 3' 10". Twin screw, handsome, able cruiser in commission. Owner abroad. Built 1918 by prominent firm. Speedway motors. Speed 12-14 miles. Teak deck trim, three double, one single stateroom, bath, deck saloon. Large crew quarters. Condition 100 percent. Complete. Henry J. Gielow, Inc., 25 West 43d St., New York City.



No. 9536—For Sale or Charter—Oil burning steam yacht, seven staterooms, three baths, large social hall and dining saloon. In splendid shape; can be ready for sea on short notice. Henry J. Gielow, Inc., 25 West 43d St., New York City.



No. 8310—For Sale—Most desirable cruising houseboat, giving exceptional accommodations. 45' x 13' x 3'. Built best manner in 1921. Actual speed 9 miles. Double and single stateroom, saloon and deck saloon. Sleeps six. Crew staterooms forward. Delco plant, completely equipped. Near New York. Henry J. Gielow, Inc., 25 West 43d St., New York City.



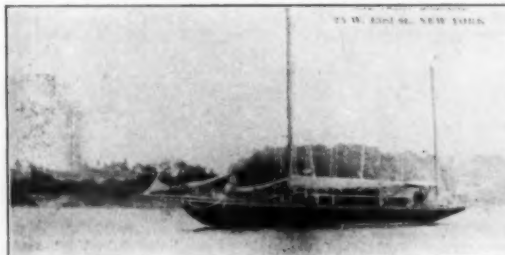
No. 7732—Best offering of size available. Excellent condition. 36' x 9' x 3', four cylinder Sterling motor; speed 10 miles. Sleeps four, toilet, galley, electric lights, completely found. Owner going abroad, must sell. Henry Gielow, Inc., 25 W 43rd St., New York City.



No. 8301—Desirable fast day cruiser or tender for racing sloop, 55' x 9' x 3' 6", 60 horse standard motor; speed 17-19 miles; fine condition. Price reasonable. Has toilet, galley, able, dry. Henry J. Gielow, Inc., 25 W. 43rd St., New York City.



No. 7056—For Sale—Charter—Attractive cruiser with houseboat accommodations having three double staterooms, large deck house and lower saloon. Accommodate 6-9. Two 20th Century motors. Speed 10-11 miles. Bath, two toilets in owner's quarters. Dimensions are 88' x 16' x 3' 6". Hot water heat, electric plant. Completely equipped for cruising. Economical to run with crew of five men. Reasonable price. Henry J. Gielow, Inc., 25 West 43rd St., New York City.



No. 8432—Shoal draft auxiliary yawl, Gielow designed, best construction, 63' x 45' 6" x 15' x 4' 6". Two staterooms, saloon, 6' 4" headroom, electric lights, sails new 1922. Scripps motor under cockpit; speed 8 miles. Complete. Henry J. Gielow, Inc., 25 West 43rd St., New York City.



No. 8086—For Sale—Might charter, modern twin screw cruising houseboat. Built 1920. Speed 11-12 miles. Four double staterooms, two bathrooms. Large Deck house. Hot water heated. All conveniences. Henry J. Gielow, Inc., 25 West 43d St., New York City.

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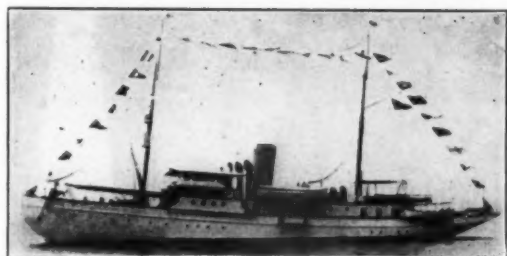
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YACHT BROKERSTelephone
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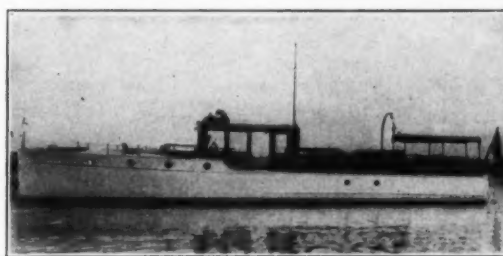
OFFER ALL OF THE DESIRABLE YACHTS AVAILABLE FOR SALE AND CHARTER, SOME OF WHICH ARE ILLUSTRATED BELOW



No. 5553—We offer for sale this new jib headed auxiliary yawl, a fast, able boat especially suitable for the Bermuda Race. Owner has just purchased a larger boat and wishes to sell immediately. Dimensions are 45'3" x 35' x 12'6" x 6'. Designed by us and built under our supervision by Jacob 1923, powered with 25 H.P. Fay & Bowen motor, speed 8 miles. Accommodations include main saloon with 3 berths and 2 transoms, state-room with wide berth, toilet, galley and crew's quarters for two. Equipment is very complete and of the best.



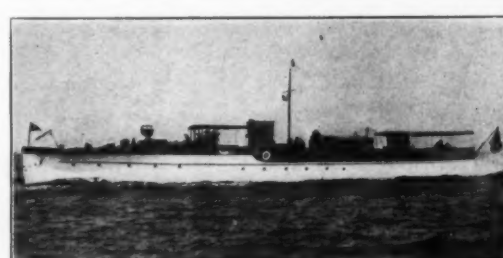
No. 26-E—For Sale or Charter—Ocean going steam yacht, 158' x 127' 7" x 24' 8" x 12' 9" draft. Commodious quarters, including 5 staterooms, saloon and three baths.



No. 9078—For Sale—Fast express cruiser, 48' x 10' x 3', with twin-screw Van Blerck motors, 150 H.P. each, speed 24 miles, stateroom and saloon, toilet, galley, engine room, and crew's quarters.



No. 8912—For sale at an attractive price. Fast cruising yacht, 76' 6" x 13' x 3' 6" Matthews built with twin-screw Van Blerck engines, speed 26 miles. Two double staterooms, saloon and bath. Completely equipped and in first class condition.



No. 8747—For Sale—Desirable Matthews motor yacht, 100' x 12' 6" beam, 4' 6" draught, twin-screw Van Blerck motors, 135 H.P. each, speed 18 miles. Three staterooms, bathroom, dining saloon, galley and crew's quarters.

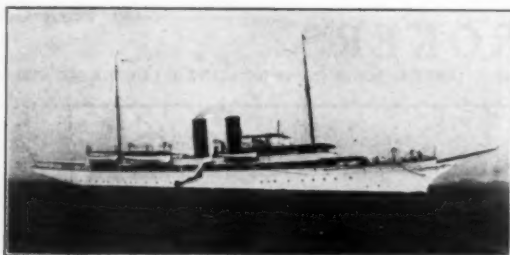
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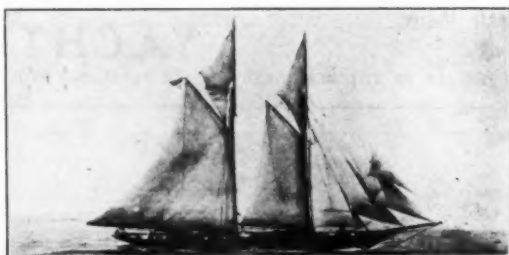
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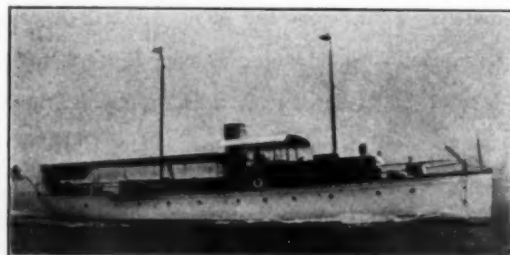
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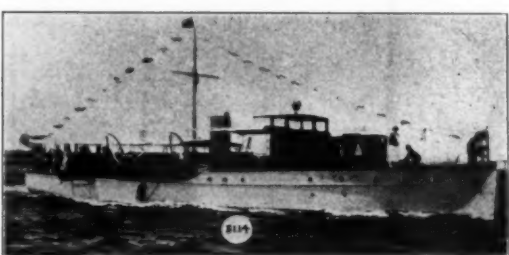
No. 130—For Sale—May Charter—Seagoing twin screw steam yacht, 262' x 29' x 16' draft. In excellent condition. Wonderful accommodations. Located near New York City. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42d St., New York City.



No. 650—For Sale at a bargain figure. Flush deck Steel auxiliary schooner yacht 148 x 110 x 27' 9" x 13' 7" draft. Suitable for a cruise around the world. Five staterooms, three baths and toilet room, saloon, etc. This yacht is fast under sail and can remain at sea under any and all conditions. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



No. 398—For Sale—Twin Screw motor yacht—90' x 16' x 5' 2" draft two 6 cylinder 115 H. P. Winton Motors speed up to 15 M. P. H. Can accommodate 8 to 10 in owners' party. Deck dining saloon. Expensively fitted and furnished. In perfect condition and can be placed in commission on short notice. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42d St., New York City.



No. 3114—For Sale—Modern twin screw cruiser—built 1921. 93' x 15' x 5' draft. Two 80/115 H. P. Winton Motors. Speed up to 14 M. P. H. Two double and one single stateroom. Deck dining saloon. For further particulars apply to R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42d St., New York City.



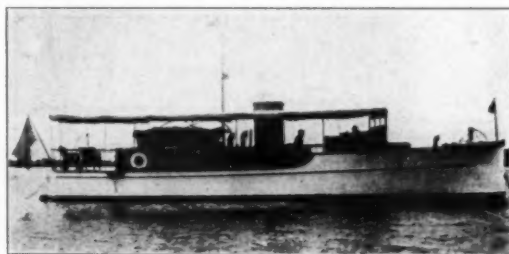
No. 3111—For Sale or Charter—Twin screw motor yacht 84 x 14 x 4' draft. Deck dining saloon and two double staterooms. Saloon and bath below aft. 20th Century motors speed up to 14 M.P.H. One of best of this type available. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



No. 332—For Sale at a bargain figure. Cruising power yacht 62 x 12 x 4' draft. Two double staterooms and bath. Murray & Tregurtha motor speed up to 12 M.P.H. Excellent condition. For further particulars apply to R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



No. 234—For Sale—Spring delivery, New York waters. One of the popular Mathis 61' houseboats. First class shape and price reasonable. Quick action suggested. For further particulars apply R. M. HADDOCK, Naval Architect & Yacht Broker, 50 East 42nd Street, New York City.



No. 383—For Sale—One of the Consolidated Stock 52' cruisers. Six cylinder Speedway motor. In A1 condition. Rigid inspection invited. Location at New York City. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42d St., New York City.

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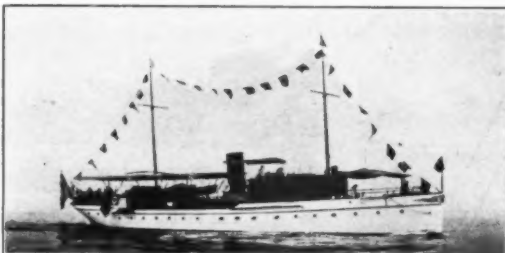
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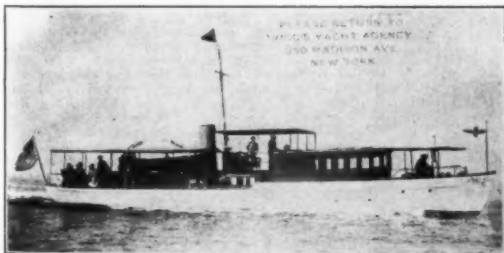
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No. 500—54' x 35' x 12' x 7'—Lovely Lawley designed yawl for sale. Good fast able boat. Has one double stateroom and four transoms and berths in main cabin. Carries two in crew. Lathrop 16 hp. installed in 1919. Boat is in excellent condition and owner is anxious to sell. Sails good, overhauled by Ratsey in 1922. Location New York and the asking price is \$6,500.



No. 76—Dems.—78' 8" x 70' x 12' 4" x 4'—Fine comfortable twin screw power cruiser. Owner has just had boat completely rebuilt and now must sacrifice on account of change in summer plans. Is a good able seaboard and can maintain a speed of 10 m.p.h. all day long. Owner's quarters will accommodate a party of six comfortably. Has new deck house. Complete new electric lighting plant and fixtures, etc. Powered with 2 Murray and Tregurtha 60 h.p. motors. These have just been rebuilt by the manufacturers at a cost of \$5,000. Boat inspectable near New York City. Asking price \$12,000.



No. 977—65' x 52' x 16' x 9'—Fine able seagoing schooner yacht. New 1923. Atkin design and Morse built. Very heavy construction and should last forever. Has excellent accommodations including double stateroom and two very large living cabins. Has 40 hp. Lathrop motor. This is just the boat for the Bermuda race and would stand a very good chance of winning. Owner will sell for \$18,000 or charter the boat for part of or entire season. Will navigate himself for the Bermuda race. This boat cost complete over \$20,000—and is now in as good as new condition.



No. 1080—Dems. 32' x 8' 8" x 2' 6"—Dandy little hand designed V bottom cruiser. Has only been used three seasons and had but one owner. He is now building a house and wants to get rid of this boat. We have inspected her and can vouch for her condition. Accommodation for four in separate cabins. Toilet room and galley. Good equipment throughout. Near New York City. Price \$3,000.

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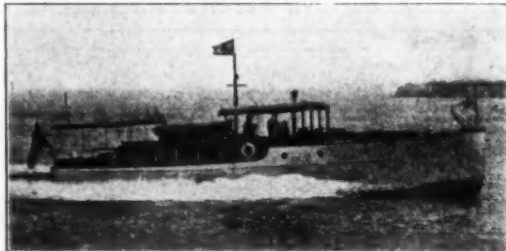
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We have a complete list of all steam and power yachts, auxiliaries, and houseboats, which are for **SALE** and **CHARTER**. Plans, photographs and full particulars furnished on request.



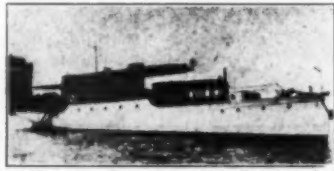
No. 1058—For Sale—Desirable twin screw cruiser new 1921 93' x 15' x 5'. Powered with two 80-110 H.P. 6 cylinder Winton motors. Large deck dining saloon. Very commodious. Owner's double stateroom with large bath and dressing room. One double and single guest stateroom. Very attractively finished and equipped. Further particulars. Henry C. Grebe & Co., Inc., 6 North Michigan Ave., Chicago, Ill.



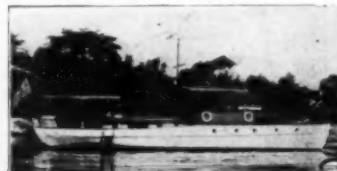
No. 1018—For Sale—Here is your opportunity to purchase one of the Great Lakes 54' twin screw express cruisers for about half the original cost. Boat in excellent condition. Speed up to 22 miles. Sleeps eight in owner's quarters, and two in crew's. Very complete and in excellent condition. Further particulars from Henry C. Grebe & Co., Inc., 6 North Michigan Ave., Chicago, Ill.



No. 1073—For Sale—38' x 9' double cabin bridge deck cruiser, powered with 60 H.P. motor with electric starter. Speed up to 15 miles per hour. An ideal family boat. Very complete inventory. Henry C. Grebe & Co., Inc., 6 North Michigan Ave., Chicago, Ill.



No. 38—For Sale—78' Lawley built cruiser. Winton motor. Two commodious double staterooms. Two toilets. Dining saloon in deckhouse forward. A very able and modern boat. Henry C. Grebe & Co., Inc., 6 North Michigan Ave., Chicago, Ill.



No. 1109—For Sale—Very comfortable 60' x 13' x 4' bridge deck cruiser. Exceptionally heavily constructed. Powered with a 6 cylinder heavy duty Standard motor, one-man control. Will sleep eight comfortably, besides crew of two. Price and full particulars from Henry C. Grebe & Co., Inc., 6 North Michigan Ave., Chicago, Ill.

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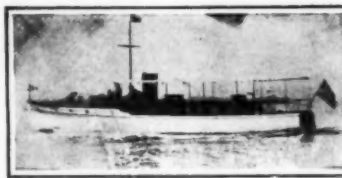
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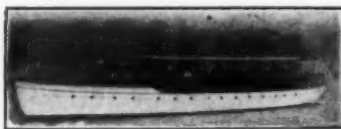
No. 2377—54 ft. Twin Screw Express Cruiser. Double stateroom; main cabin with four berths; two toilets and shower baths. Two 225 H. P. Sterling Motors. Speed 25-27 miles. Electric lights, etc.



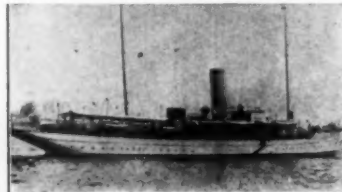
No. 2171—60 ft. Twin Screw Power Yacht. Double stateroom. Two berths in main cabin. Bath. Two Sterling Motors. Speed 12-14 miles. Electric lights, etc.



No. 2384—Canadian power yacht, twin screw, 65 ft. long, 12 ft. beam, 4 ft. 2 in. draft. Built in 1919. Heavily constructed and exceptionally roomy. Four staterooms and large saloon, about 12 ft. long, with four berths. Sleeping accommodations for ten people. Two toilets. Large mahogany deckhouse. Two Sterling motors. Speed 12-16 miles. Electric lights, separate lighting plant, etc. Price attractive.



No. 2041—Sale or charter—85 ft. Twin Screw Power Yacht. Two double staterooms. Two berths in main saloon. Dining saloon, bath, etc. Two 20th Century Motors. Speed 14 miles. Hot water heat. Electric lights, etc.



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No. 1280—58 ft. Twin Screw Cruiser. Double stateroom. Three berths in main cabin; two toilets. Two Standard motors. Speed 10-12 miles. Electric lights, etc.

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No. 2651—For Sale—Modern power yacht, 93' x 15'. Two six cylinder Winton motors. Best construction; double planked hull; attractive accommodations.

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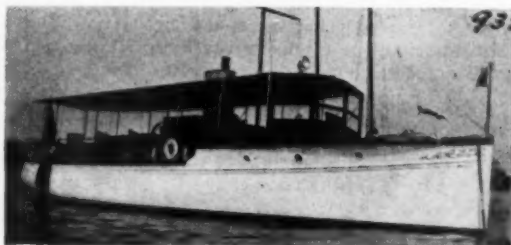
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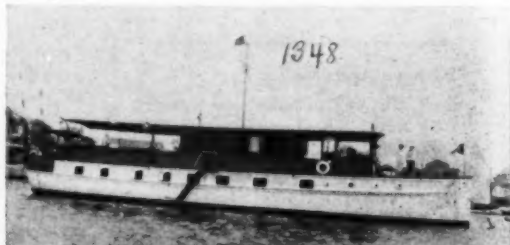
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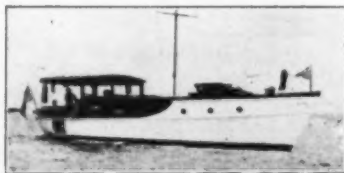
No. 220—Cruiser L. O. A. 76' L. W. L. 75' beam 13', Draught 3'6". Sleeping accommodations for 8 people. A fine boat for a reasonable price. Apply to Paul M. Runyon, New Bedford, Mass.



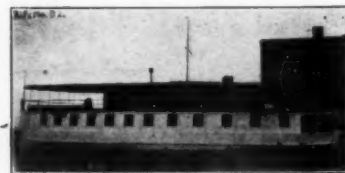
THE CASEY 30' O. A. SLOOP

Dimensions: L.O.A., 30'; L.W.L., 23' 3"; Beam, 8' 6"; Draught, 4' 6".

IT is my intention to use one of the Casey 26' or 29' O.A. Sloops for demonstrating purposes during the approaching Spring and Summer. I expect to cruise through Long Island Sound during latter part of the Spring and will probably sail along the Massachusetts coast and up toward Maine later in the season. Those who are interested in the Casey boats are hereby requested to let me know their addresses. I will then advise them when I will be in their vicinity, and will arrange to give any one a practical demonstration of this little sloop's sailing qualities. Information regarding a large number of second hand boats has been collected from all ports along the coast by the floating office.



No. 224—Cruiser L. O. A. 45', L. W. L. 43', Beam 11'6", Draught 3'6". Accommodations for 8 people. Lighted by electricity. Located near New York. If you want a bargain nab it quick.



No. 82—For Sale—Twin screw houseboat. Dimensions, L. O. A. 84' 6"; L. W. L. 76'; beam, 23' 6"; draught, 4' 6". Three single and two double staterooms. Boat in excellent condition. An excellent bargain.



No. 207—CRUISER, L. O. A. 32', L. W. L. 29' 6", beam 6' 9", draught 2' 4". Excellent condition. Fully equipped for cruising. Price attractive. Paul M. Runyon, P. O. box 603, New Bedford, Mass.

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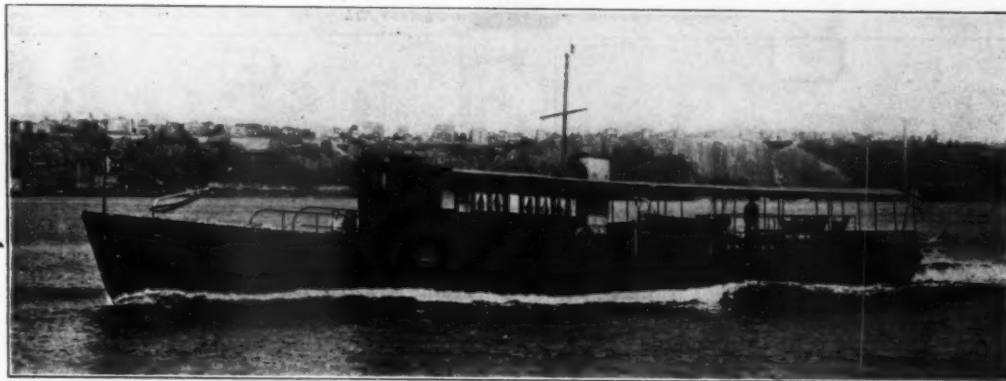
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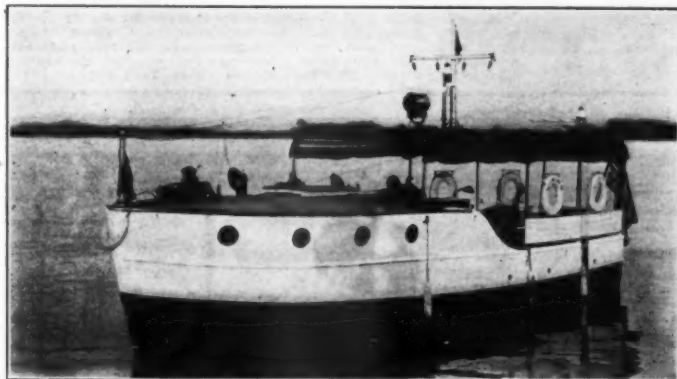
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MoToR Boating, 119 West 40th St., New York



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FOR SALE—A real river cruiser. 2½ ft. draft, 27 ft. long. Armor plate steel hull with three water-tight bulkheads. The propeller is protected in a tunnel stern. Powered with a four cylinder Scripps marine engine. Pullman accommodations. Fully electrically equipped. It is a snappy little craft for sale cheap. Located in Ohio. Apply Townsend Brown, 706 Arden Road, Pasadena, Calif.

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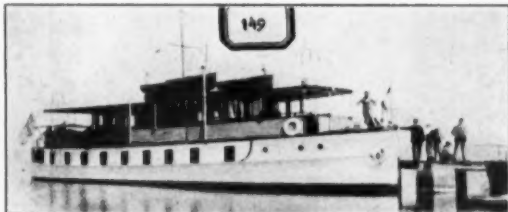
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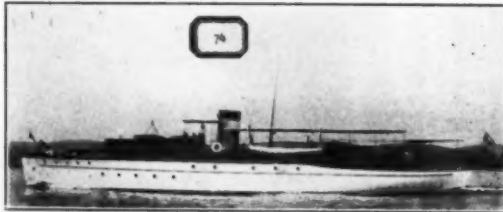
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No. 149—FOR SALE—Twin screw power houseboat 80' x 77' x 17' 6" x 3'. Two 60 H.P. Standard engines. Cruising speed 10 miles per hour. Large main saloon, two double and two single staterooms, two baths. Fully equipped. Charles D. Mower, 350 Madison Ave., New York City.



No. 172—FOR SALE—Auxiliary cruising schooner 39' x 32' x 11' 10" x 4'. Mower design, built 1923. Double stateroom, large main cabin, comfortable cruising boat. Charles D. Mower, 350 Madison Ave., New York City.



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2-8 cyl. 300 H. P. Sterling Dolphin high speed engines, twin screw 5 $\frac{1}{4}$ bore, 6 $\frac{3}{4}$ stroke, rebuilt and guaranteed for one year. Price complete with electric starter, etc. \$3500.00 each or \$6500.00 for the pair.

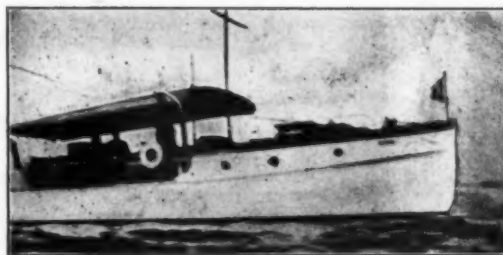
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\$3,000 BUYS the 1923 raised deck cruiser "Sonia," 36' x 9' x 2' 4". In commission ready to sail. New 24-H.P. 4-cycle Lathrup engine, dual ignition, complete galley equipment, running water, electric lights, toilet, etc., copper fastened throughout. Able sea boat. Guaranteed speed 10 m. p. h. R. W. Muller, Sewaren, N. J.



The Firefly, 36' x 9' x 3'8", bridge deck cruiser, one man boat. Boat and engine built by Woods & Chute of Greenport. Heavy construction. Engine 4 cylinder, 46 H.P. heavy duty Bosch equipped. Two cabins, sleeping four. Electrically lighted and started. Finished in enamel and mahogany. In absolutely perfect condition. Now in commission. L. W. Flaunlacher, 25 West Thirty-third St. Telephone: Penn. 5341.


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For Sale—Houseboat, elegantly furnished, completely equipped, electric lighting plant, running water, copper screened throughout, sun parlor, bath and four rooms; a real home for persons desiring quality. May be seen at any time. Foot of 207th Street, west of Broadway, New York City. Inquire for Mr. Waldis.

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BADGER MOTOR COMPANY,
Milwaukee, Wis.

For Sale—Motor Boat 23 x 8, Cabin. New last June, 7 H. P. heavy duty motor. Fully equipped. Everything in good condition. \$350.00 cash. J. Lamusse, 2041 5th Avenue, N. Y. C.

Agents Wanted—If you are a motor boat owner we can solve your piping problems, make friends for you and money for you. Tulloch Mfg. Corp., 143 Liberty St., New York.

For Sale—Herreshoff Yawl, 43 ft. x 12 ft. x 4 ft. Sails and rigging excellent condition; absolutely sound. Peerless 25-35 motor, excellent condition, 4 single berths, each fitted with coil springs, 2 toilets, 2 folding wash basins, ice-box and all improvements, including electric lights. Fast under sail. Speed under power—10 miles. Boat may be seen at Chance Marine Constr. Co., Eastport, Annapolis, Maryland. For price write Guy W. Latimer, Hyattsville, Md.

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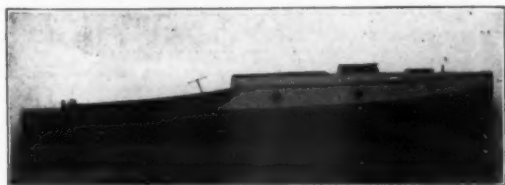
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Glass Cabin Yacht, 38 ft. x 10 ft. x 2 ft. Speed 12 miles per hour. 20-24 Heavy duty Standard Oak finish Toilet, Refrigerator. Births fully equipped in all shape. Reason, building a larger yacht. A Bargain! \$1,800. George Spaulding, 131 W. Cresse Ave., Wildwood, N. J.

Kermath 20-24 H. P. engine complete with electric starter. New: used less than 50 hours. Perfect condition. Requires a larger engine—cause for disposing. First check for \$350 takes this bargain. G. P. Blackiston, Canton, Ohio.

Converted Subchaser Houseboat, 6 rooms, 2 baths, galley. 220 horsepower Standard engine, electric set. \$7,500.00. New De Forest Radio Sending and Receiving with Gasoline Engine, Generator, Panel Board, Etc. \$350.00 Reflecting "Circle 10", Mahogany case. Complete, \$50.00. Owner, 21 W. 76th St., New York. Phone: Endicott 2621.

College student, knowledge of boats and gas engines, desires position on private yacht, or would take complete charge of motor boat available June 1st. Address, c/o J. C. R., 331 Emerald St., Harrisburg, Pa.

A number of good used engines and boats, please state your requirements. A. M. Deering. Monadnock Bldg., Chicago, Ill.

All new makes of outboard motors factory guaranteed. 10% off for cash with order. 7417 Elm Ave., Maplewood, Mo.

For Sale—Model F Red Wing motor with starter in good running condition, \$350.00, one 60 H.P. 6 cyl. Loew Victor motor complete with starter, reverse gear and needs overhauling \$225.00. Kramer & Mueller, McHenry, Ill.

FOR SALE: 40' x 6'4" x 3', cruiser. New engine, 47 H.P. 1922, self starter, generator, electric lights, etc.; near New York City. Price, \$3,800. Address, F. E. O'Callaghan, 43 West 33rd St., N. Y. C.

FOR SALE: Buffalo, 4 cyl., 6x7½, Type BJJ, running order. \$500 F. O. B. Maywood. Replaced this with larger Buffalo. John W. Barker Company, Maywood, Illinois.

1-20 H.P. Unit F. Bosch magneto\$425.00
1-12 H.P. Unit F. Bosch magneto 375.00
1-12 H.P. Unit C. Atwater Kent 300.00
2-12 H.P. Separate F. Bosch magneto 150.00
These motors have all been overhauled, re-tested, refinished in absolutely perfect condition. Guaranteed for a period of one year just the same as a new motor. Kermath Mfg. Co., 5880 Commonwealth Ave., Detroit, Mich.

For Sale—Enclosed bridge deck cruiser, 38 x 10 x 3, new 4 cylinder Palmer engine, self-starter, generator, bilge pump. Sleeps four comfortably, toilet, galley, electric lights; fully equipped, perfect condition. Price \$5,000, cost \$10,000. Walter Hyland, 1970 University Ave., New York City.

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The Hudson River Yacht Club is prepared to accept new members under advantageous conditions. Attractive clubhouse, restricted membership, good anchorage, most convenient location. Commodore E. Spindler, Hudson River Yacht Club, West 92nd Street, New York City.

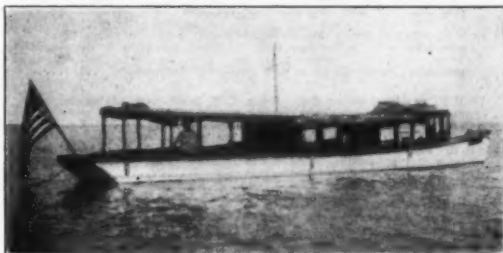
Raised deck cruiser, 47'6" x 12' x 3'. Standard motor, 32-37. Electric lights; sleeps eight. Full equipment. Best bargain in Long Island Sound. Inspected Port Jefferson. Long Island. Price, \$4,000.00. Charles S. Fox, Fairfield, Conn.

FOR SALE—Cabin cruiser, 39' x 9'. Fine seagoing boat. Price reasonable. Box No. 71, care MoToR Boating.

FOR SALE: Rochester, 33' x 9', modified V bottom cruiser. Sleeps four with large galley and toilet. Big cockpit with 3 section windshield, top and side curtains. Powered with 4-cylinder Scripps. Speed, 12 miles per hour. Bargain at \$4,500.00. Rochester Boat Works, Inc., 10 Charlotte Station, Rochester, N. Y.

FOR SALE: 20 ft. launch, 10 H.P., 12 M.P.H. Gies reverse gear, all equipment, mahogany decks, roomy and seaworthy. Must sacrifice \$250. Meyer, 172 Summit Ave., W. Hoboken, N. J.

Motor For Sale: Two cylinder, ten H.P., Acadia Make & Break. Excellent condition. Used nine months. R. B. Newton, York Harbor, Maine.



FOR SALE. Attractive power Cruiser "Independent" 50 foot Length, 9 foot beam, 3 foot Draught, 70 H.P. Six cylinder Sterling Motor, Speed fourteen miles. One man control equipment consists of complete galley, Ice Box, 50 gallon water tank, Toilet, Wash Basin. Sleeps four in berths, also four cots with mattresses, Electric lights. Cockpit 14 feet long with six yacht chairs and folding table. 15 foot cypress tender with Elto outboard motor. All in perfect shape. Inspectable Mobile, Alabama at give away price of \$2800.00 by owner. Address, R. L. Wheeler, P. O. Box 1629, Mobile, Ala.

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Description	Price	Description	Price
Twin 300 H.P. each, Sterling Dolphin, Model G.R. with carburetors, coils, electric starters, storage batteries, etc., complete up to and including couplings	3,500 00	50-65 H.P. Hall, 4 cyl., 4 cycle, 7½ x 10, heavy duty, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	1,500 00
For the Pair	6,500 00	50-60 H.P. Scripps, 6 cyl., 4 cycle, 5½ x 6, with carburetor, coil, magneto, electric starter and generator, reverse gear, etc., complete up to and including coupling	1,000 00
200 H.P. Wolverine, (brand new), 6 cyl., 11 x 15, with carburetor, Bosch magneto and coil, electric self-starter, reverse gear, etc., complete up to and including the coupling. Operates on kerosene, guaranteed brand new in perfect condition	8,000 00	50 H.P. Automatic, 4 cyl., 4 cycle, 7 x 9, with carburetor, coil and reverse gear. AS IS F. O. B. Paulsbo, N. J.	400 00
200 H.P. Sterling, 8 cyl., 4 cycle, Model F8, 5½ x 6½, with carburetor, coil, reverse gear, electric starter, generator, etc., complete up to and including coupling	2,050 00	45-75 H.P. Sterling, Model B, 6 cyl., 4 cycle, 5½ x 6, with iron base, and heavy fly wheel, Bosch magneto and separate distributor and coil (double ignition) carburetor, reverse gear, etc., complete up to and including coupling. All brand new cylinders	1,200 00
162-215 H.P. Van Blerck, 8 cyl., 6 x 6, complete with electric starting and charging outfit, magneto, carburetor, etc., complete up to and including coupling	1,500 00	Twin 45 H.P. Sterling heavy duty, 4 cyl., 4 cycle, 6½ x 9, Model D4, with carburetors, coils, magnetos, air pumps, bilge pumps, reverse gear, etc., complete up to and including couplings. Each	1,500 00
150-180 H.P. Sterling, Model R, 8 cyl., valve in head, 5½ x 6½, with Bosch magneto, coil, carburetor, reverse gear, etc., complete up to and including coupling	1,500 00	For the Pair	2,700 00
130-145 H.P. Sterling 6 cyl., 4 cycle, Model F8, 5½ x 6½, with carburetor, coil, reverse gear, electric starter, generator, etc., complete up to and including coupling	2,250 00	40-50 H.P. Knox, heavy duty, 4 cyl., 4 cycle, 7 x 8, with magneto, coil, carburetor, reverse gear, etc., complete up to and including coupling	1,000 00
125-150 H.P. Standard, 6 cyl., 6½ x 10, air starting and reversing, AS IS	900 00	40-50 H.P. Anderson, 6 cyl., 4 cycle, 5 x 6, with carburetor, coil, spark plugs, magneto, rear starter, reverse gear, etc., complete up to and including coupling	800 00
120-170 H.P. Sterling, 8 cyl., 4 cycle, Model F, 5½ x 6½, with carburetor, coil, reverse gear, electric starter, generator, etc., complete up to and including coupling	2,950 00	40-50 H.P. Twentieth Century, 4 cyl., 4 cycle, heavy duty, 6½ x 8½, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	1,500 00
120-180 H.P. Speedway, 6 cyl., 4 cycle, 8½ bore, 10 inch stroke, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	2,500 00	40-50 H.P. Twentieth Century, 6 cyl., 4 cycle, about 5½ x 7½, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	1,200 00
120-160 H.P. Mason Jager, 5½ x 7, enclosed type with Bosch magneto and coil, carburetor, electric self starter and generator, reverse gear, etc., complete up to and including coupling	1,250 00	40-50 H.P. Mason heavy duty, 4 cyl., 4 cycle, 6½ x 9, with carburetor, magneto, electric starter, enclosed reverse gear, etc., complete up to and including coupling	1,250 00
114-180 H.P. Loew Victor "Harbeck," 6 cyl., 4 cycle, 7½ x 8½, with carburetor, coil, Bosch magneto, reverse gear, etc., complete up to and including coupling, with Leece Neville 24 volt generator	1,500 00	40 H.P. Roberts, 4 cyl., 2 cycle, with carburetor, coil and coupling AS IS	100 00
112-150 H.P. Van Blerck, Model M, 6 cyl., 5½ x 6, with carburetors, coil, magneto, electric starter and generator, etc., complete up to and including coupling	1,400 00	40 H.P. Sterling, heavy duty, 4 cyl., 4 cycle, 6½ x 8, with carburetor, coil, double ignition, reverse gear, etc., complete up to and including coupling	1,150 00
100 H.P. Sterling, Model "B," 8 cyl., 4 cycle, 5½ x 6, with carburetor, coil, spark plugs, reverse gear, etc., complete up to and including coupling	500 00	40 H.P. Leighton, 4 cyl., 2 cycle, with carburetor, coil, spark plugs AS IS	75 00
90-100 H.P. Sterling, Model F.S., 4 cyl., 4 cycle, 5½ x 6½, with carburetor, magneto and coil, electric starter and generator, etc., complete up to and including coupling	1,500 00	Twin 40 H. P. Lamb, Model "R," 6 cyl., 4 cycle, 5½ x 6, weight 1050 lbs., each with magnetos, coils, carburetors, reverse gears, etc., complete up to and including coupling. Each AS IS	150 00
75-80 H.P. Winton, 6 cyl., 6½ x 9, Model "W-6," with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	2,500 00	Pair AS IS	250 00
75 H.P. Craig, 800 R.P.M., 4 cyl., 4 cycle, 1500 lbs., 6½ x 7, with carburetor, coil, reverse gear, etc., complete up to and including coupling. AS IS	150 00	32-37 H.P. Standard, 4 cyl., 4 cycle, 6 x 8, carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	1,000 00
70-90 H.P. Sterling heavy duty, valve in head, 6 cyl., 4 cycle, 6½ x 9, late type with carburetor, coil, magneto, mechanical oiler, spark plugs, air pump, reverse gear, etc., with electric self-starter and generator; complete up to and including coupling	3,000 00	32 H.P. Wolverine, 3 cyl., 4 cycle, heavy duty, 7½ x 9, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	1,400 00
70 H.P. Sterling, heavy duty, 6½ x 9, T head, with carburetor, coil, magneto, air pump, bilge pump, reverse gear, etc., complete up to and including coupling	2,200 00	30-54 H.P. Lamb, 2 cyl., 4 cycle, 6½ x 7, with carburetor, coil, reverse gear and magneto, AS IS	200 00
65-85 H.P. Van Blerck, 4 cyl., 4 cycle, 5½ x 6, with Bosch magneto, ignition, carburetor, oiling system, reverse gear, etc., complete up to and including coupling	800 00	30-45 H.P. Sterling, 4 cyl., 4 cycle, 5½ x 6, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling. AS IS	500 00
60-90 H.P. Speedway, 6 cyl., 4 cycle, 6 x 6, overhead valve, with carburetor, coil, magneto, rear starter, reverse gear, etc., complete up to and including coupling	1,250 00	30-40 H.P. Brown, 4 cyl., 2 cycle, coil, carburetor and spark plugs, AS IS	100 00
Twin 60-75 H. P. Murray & Tregurtha, 6 cyl., 6½ x 8, with carburetors, coils, high tension magneto, reverse gears, etc., recently overhauled by makers. Each, \$1,500	2,800 00	30-40 H.P. Grant Ferris, 4 cyl., 4 cycle, 6 x 6, with carburetor, coil, Atwater Kent ignition and reverse gear, AS IS	150 00
60 H.P. Loew Victor, 6 cyl., 4 cycle, 4½ x 5½, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling. AS IS	300 00	30 H.P. Lamb, 4 cyl., 4 cycle, overhead valve, latest type, 4½ x 6½, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	450 00
60 H.P. Wolverine heavy duty, 5½ x 12, 3 cyl., 4 cycle, carburetor, magneto, coil, reverse gear, etc., complete up to and including coupling	1,800 00	28-35 H.P. Miller, 4 cyl., 4 cycle, 5½ bore, with carburetor, coil, reverse gear, magneto, etc., complete back to and including coupling	850 00
		28 H.P. Murray & Tregurtha, 3 cyl., 4 cycle, 6½ x 8, with carburetor, coil, reverse gear, AS IS	150 00
		25-40 H.P. Sterling, 4 cyl., 4 cycle, 4½ x 5½, with Bosch magneto, carburetor, coil, reverse gear, etc., complete up to and including coupling	750 00
		25-35 H.P. Peerless T head, 4 cyl., 4 cycle, 5 x 6, with carburetor, magneto, mechanical oiler, reverse gear, etc., complete up to and including coupling	400 00

Advertising Index will be found on page 158

Description	Price	Description	Price
25 H.P. Tuttle, 2 cyl., 2 cycle, with coil, carburetor, spark plugs, etc., complete up to and including coupling. AS IS	75 00	12 H.P. Kermath, 4 cyl., 4 cycle, separate power plant with reverse gear, magneto, carburetor, coil, etc., complete up to and including coupling	295 00
21 H.P. Lamb, 5 1/2 x 6, 4 cyl., 4 cycle, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	400 00	12 H.P. Hettinger, 2 cyl., 4 cycle, 5 1/2 x 6, with carburetor, coil, reverse gear, etc., complete up to and including coupling	300 00
24-27 H.P. Standard, 3 cyl., 4 cycle, 6 x 8, with carburetor, magneto, reverse gear, coil, etc., complete up to and including coupling	750 00	12 H.P. Detroit, 2 cyl., 2 cycle, with carburetor, coil and coupling. AS IS	50 00
22 H.P. Missouri Heavy Oil engine, 1923 Mod-3, 3 cyl., 2 cycle, hot bulb, with reverse gear, etc., complete up to and including coupling, perfect condition. AS IS	1,000 00	12 H.P. Barber, 2 cyl., 2 cycle, with carburetor, coil, AS IS.....	50 00
20-25 H.P. Sterling, 4 cyl., 4 cycle, 4 1/2 x 5 1/2, with carburetor, coil, Bosch magneto, and complete up to and including coupling.....	650 00	12 H.P. Automatic, 2 cyl., 4 cycle, 5 1/2 x 7, with carburetor, coil, reverse gear, etc., complete up to and including coupling	325 00
20-24 H.P. Gray, 2 cyl., 2 cycle, with carburetor, coil, timer, AS IS....	100 00	12 H.P. Harris, 2 cyl., 4 cycle, 5 1/2 x 6, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling.....	300 00
20 H.P. Kermath Unit Power Plant, Outfit F, Bosch magneto, built in reverse gear, carburetor, etc., complete up to and including coupling	435 00	12 H.P. Eagle, 2 cyl., 2 cycle, Model C, 4 1/2 x 5, with carburetor, coil, ignition, complete up to and including coupling. AS IS	190 00
20 H.P. Kermath, 4 cyl., 4 cycle, Separate plant, Outfit C, with Paragon reverse gear	400 00	12 H.P. Palmer, 2 cyl., 4 cycle, late Model N.R. 2, 5 x 6, complete up to and including coupling, magneto, distributor, carburetor, coil, etc.	390 00
20 H. P. Balaco, 4 cyl., 4 cycle, 4 x 6, with carburetor coil, reverse gear, etc., complete up to coupling	400 00	11 H.P. Ferro, 2 cyl., 2 cycle, with carburetor, coil, spark plugs, and oiling system. AS IS	65 00
20 H.P. Hartford, 2 cyl., 2 cycle, with carburetor, coil ignition, complete up to and including coupling. AS IS	100 00	11 H.P. Lackawanna, 2 cyl., 2 cycle, with carburetor, coil, spark plugs. AS IS	35 00
18-25 H.P. Sterling, 4 cyl., 4 cycle, Model B, 4 1/2 x 5 1/2, with carburetor, Atwater Kent distributor and coil, reverse gear, etc., complete up to and including coupling	575 00	10-15 H.P. Buffalo, 4 cyl., 4 cycle, 3 1/2 x 5, Stromberg carburetor Petrelli reverse gear, Bosch magneto, double ignition, complete up to and including coupling	375 00
18-25 H.P. Sterling, 4 cyl., 4 cycle, 4 1/2 x 5 1/2, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	600 00	10-12 H.P. Pearl, 2 cyl., 4 cycle, with carburetor, coil and reverse gear. AS IS	150 00
17-25 H.P. Sterling Model "E-1," 4 cyl., 4 cycle, 3 1/2 x 5 1/2, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	550 00	10 H.P. Fulton, 2 cyl., 2 cycle, with carburetor, coil, AS IS	50 00
17-25 H.P. Sterling, Model E-1, 3 1/2 x 5 1/2, 4 cyl., 4 cycle, with carburetor, coil, magneto, rear starter, reverse gear, etc., complete up to and including coupling	550 00	10 H.P. Hubbard, 1 cyl., 2 cycle, with coil and coupling. AS IS....	35 00
17-25 H.P. Sterling, Model E-2, 4 cyl., 4 cycle, 3 1/2 x 5 1/2, enclosed type, with carburetor, coil, magneto, reverse gear, etc., complete up to and including coupling	650 00	10 H.P. Navy Standard, 2 cyl., 2 cycle, jump spark ignition, carburetor and coupling. AS IS	100 00
17 H.P. Fairbanks-Ferro, 3 cyl., 2 cycle, 3 1/2 x 5 1/2, with carburetor, coil, etc., complete up to and including coupling. AS IS	50 00	8-10 H.P. Bridgeport, 2 cyl., 2 cycle, with carburetor and coil, AS IS..	85 00
16-20 H.P. Peerless L head, 1922 Model, 4 x 6, latest type, complete Bosch magneto, carburetor, coil, built in reverse gear, etc., up to and including coupling	475 00	8-10 H. P. Royal, 2 cyl., 2 cycle, with carburetor, coil and coupling. AS IS	35 00
16-20 H.P. Grimm, 4 cyl., 4 cycle, 3 1/2 x 4, with carburetor, coil, Bosch magneto and reverse gear	375 00	8-9 H.P. Bridgeport, 2 cyl., 2 cycle, Model 80, with carburetor, coil, etc., complete up to and including coupling, splendid condition. AS IS	100 00
16-20 H.P. Peerless, 4 cyl., 4 cycle, 4 x 6, T Head, with carburetor, coil, magneto, electric starter and generator, reverse gear, etc., complete up to and including coupling	550 00	8-9 H.P. Bridgeport, 2 cyl., 2 cycle, recent Model 80, with carburetor, M. & B. coil, etc., complete up to and including coupling. AS IS	100 00
Two 16 H.P. Globe, 2 cyl., 4 cycle, 7 x 8, with carburetor, coil and reverse gears. AS IS.....Each	150 00	8 H.P. Ferro, 2 cyl., 2 cycle, with carburetor, coil, AS IS.....	60 00
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15 H.P. Fulton, 2 cyl., 2 cycle, with carburetor, ignition, etc., complete up to and including coupling. AS IS	50 00	7 1/2 H.P. Craig single cylinder, 4 cycle, 6 x 7, with carburetor, coil and reverse gear, AS IS	90 00
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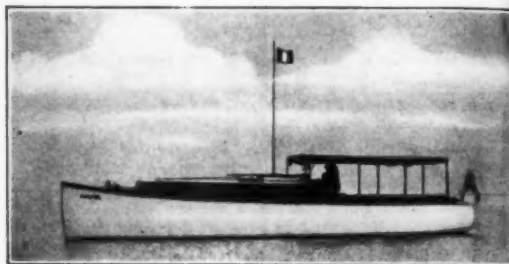
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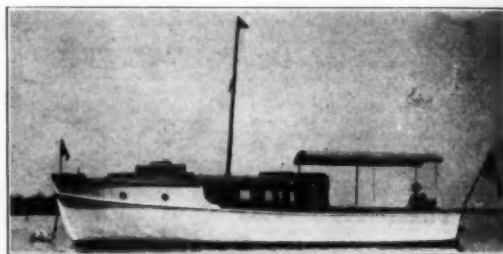
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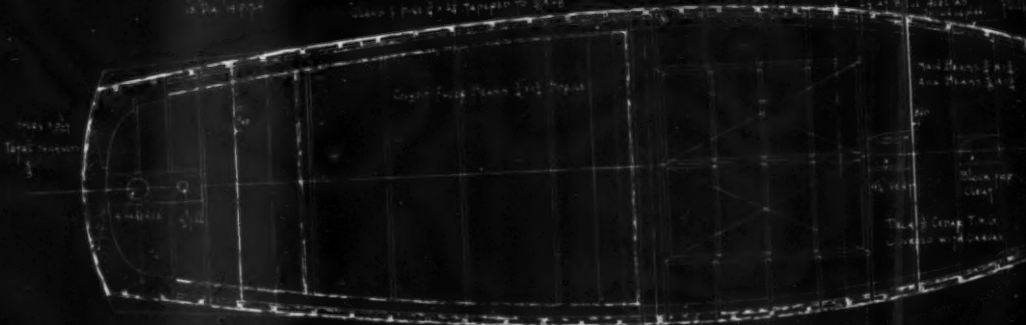
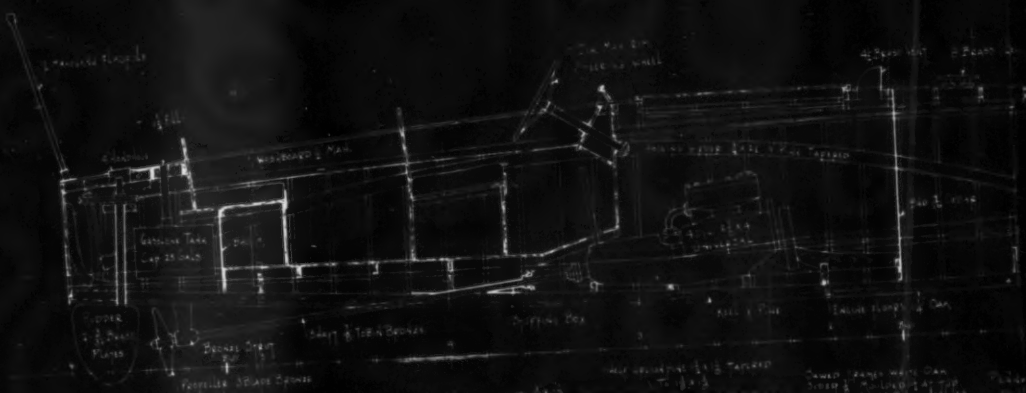
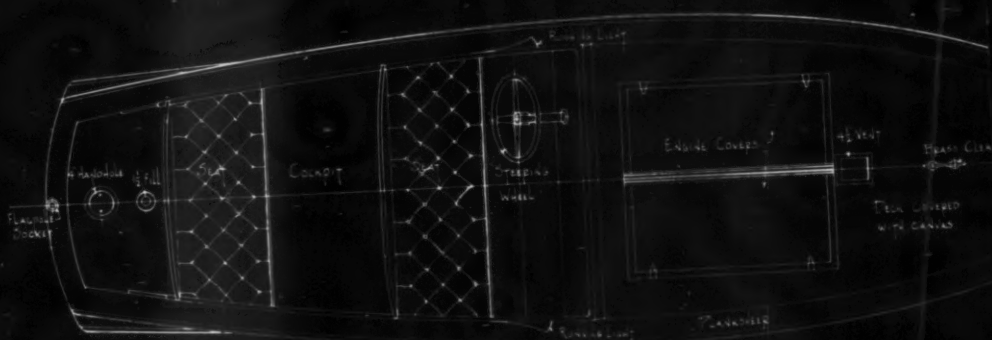
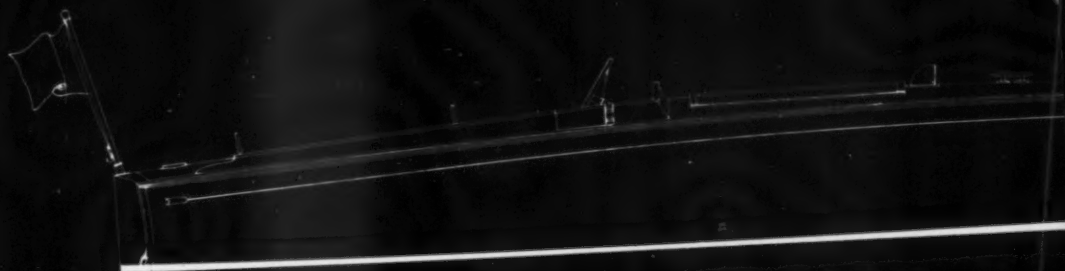
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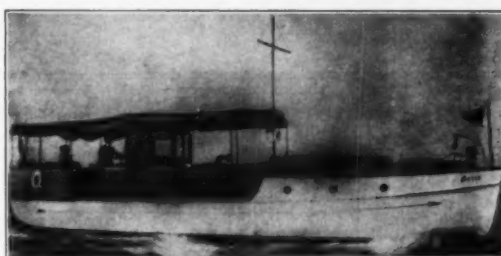
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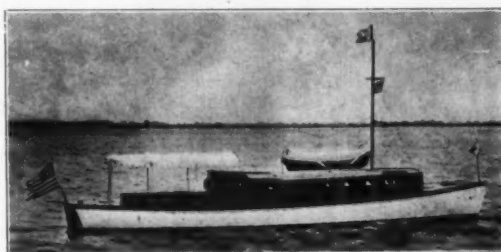
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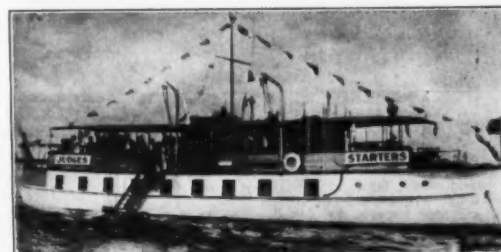
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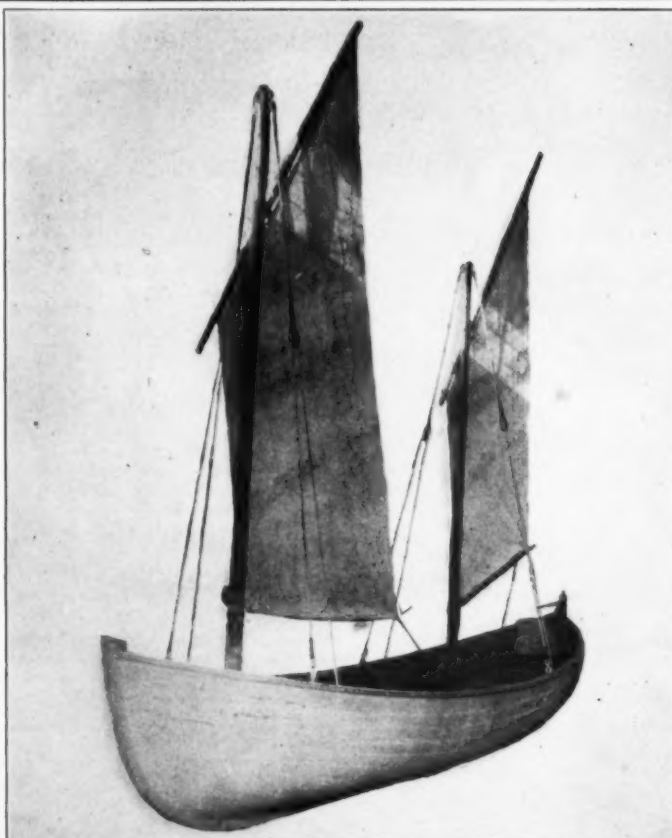
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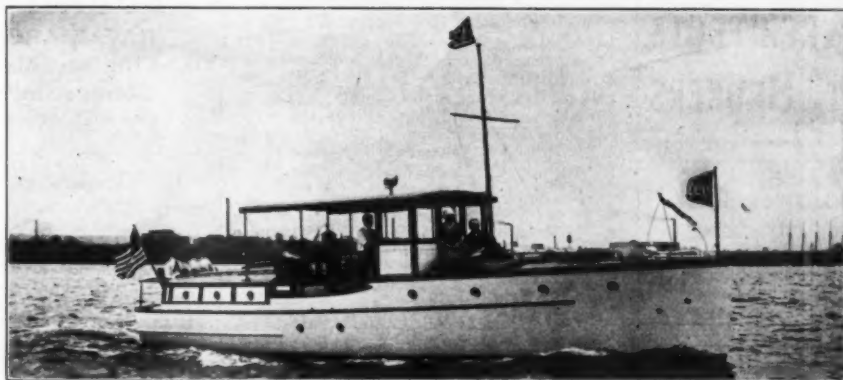
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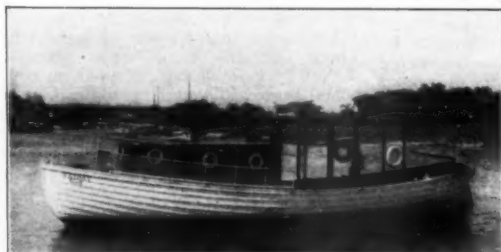


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Gies Gear Changes

We have been advised by C. C. Clevender that the Detroit Coil Company has acquired the plant and equipment of the Gies Gear Company, also of Detroit. The manufacture of these reverse gears will be continued under the new management as previously without any changes. The gear is extremely simple and sturdy in its operation, and high grade materials and engineering skill have been combined in up to date shops into a superior product. There are different models intended for engines of varying capacity. The model C is intended for heavy cruiser and work boat service. Another product of the company is the Detroit coupling. This is the conventional flange coupling, which is so made that both halves are alike and interchangeable.

Foreign Dealer Troubles

Due to the very unfortunate exchange conditions which have existed for some time, but which will soon be bettered, European dealers of American products have had hard sledding in selling their merchandise. The dealer who handles Kermath engines in the coastwise sections of Belgium, writes to the Kermath Manufacturing Company along the following lines: "We are indeed more than ever convinced of the excellent qualities of your engines by the following facts which you may be glad to know. In order to introduce the Kermath engine among the shrimp fishermen, of whom there are about 200 in Ostend, we made the following experiment. We had a Kermath two cylinder eight horse-power engine installed in a shrimp boat. These boats are heavily and substantially built, about 27-feet long, and 8-feet beam, being decked over forward for about 10-feet. We made the entire installation at our expense and then found a fisherman who agreed to take charge of the boat and pay for it on installments.

"We must point out that our Flemish fishermen are very crude people and accustomed only to sailing vessels. Our man had never seen a motor before in his life. We only showed him how to handle the engine for a few hours, after which he went off by himself. This was in July of last year.

"Well, it is strange to believe but this man went on with his engine since that time without trouble of any kind. His small engine worked without a hitch for the last six months or more. This man developed such faith in his engine that he would put out to sea when other fishermen remained in port. In fact, with the assistance of the engine he had such good results that he was enabled to pay off the costs of the boat and engine."

As a result of these experiences other fishermen along this coast are arranging to equip their craft with engines as soon as they can do so.

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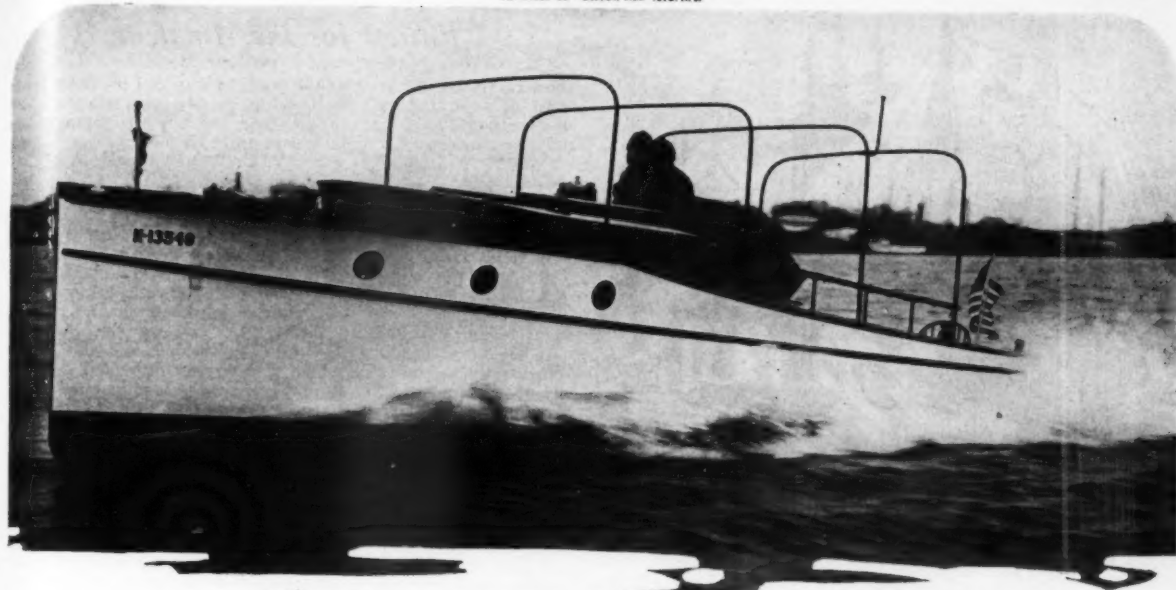
Tachometers For Boats

Tachometers have in recent years acquired a very prominent position in motor boat equipment. Years ago when the gasoline motor was far from its present stage of perfection the tachometer was used principally in the motor manufacturer's experimental laboratory. Today, as motors are built to give undelayed service, the tachometer plays an important part—in fact is much more important to the motor boat owner than the speedometer to the automobile owner. Would you be content to drive your motor car without a speed indicator? A motor boat without a tachometer would prove very costly and where expense is considered a minor item running at other engine speeds than those recommended by manufacturers would cause untold inconvenience and delays at most inopportune times.

There are many types of tachometers which operate on different principles, some of which may be applied on motor boats successfully. The Elgin Chronometric Tachometer being positive gear driven internally is adaptable to all motor boats because it is not affected by vibration, temperature or electro-magnetic currents. It is neither centrifugal or magnetic in principle, the power being passed through the counting mechanism to the timing mechanism and thence to the indicating mechanism through gears, eliminating all lag and the usual wavering hand so very bothersome in the centrifugal and magnetic types of instrument. The watch mechanism is self-contained—eliminating the need of a stop watch as in the case of other than chronometric tachometers. Durability, accuracy and stable calibration are outstanding features in the chronometric tachometer.

The following results obtained on Elgin tachometers by the U. S. Bureau of Standards is from the average of a number of production samples submitted. The maximum calibration error based on a full scale reading was .3 of 1%. The change caused by 150 hours of vibration was .2 of 1% while the greatest temperature error recorded over a range of temperatures from 40 degrees centigrade to -10 degrees centigrade was less than .1 of 1%. The combination of all these errors is less than the smallest division that can be recorded on the scale.

(Continued on page 84d)



"AMBERJACK," the Latest Florida Fishing Boat, powered with the LM-6

HALL-SCOTT

AMBERJACK is the latest type of gentleman's fishing boat, designed especially for Gulf Stream fishing off the Florida coast. It is 34' x 8' 6" x 2' 6", designed by Jas W. Hussey and built by the Greenport Basin & Construction Co. for L. R. Connett and H. C. Irons of New York City. A 200 H. P. Hall-Scott Marine Engine drives Amberjack over 23 miles per hour.

The Hall-Scott LM series, built in 4 cylinder 125 H. P. and 6 cylinder 200 H. P. models, offers a choice of two ideal power plants for this type of boat. These engines combine the advantages of high speed and light weight, plus the absolute reliability which is so necessary in a boat intended for offshore work. Particularly suited for fishing because they throttle down to trolling speed better than any other engine on the market.

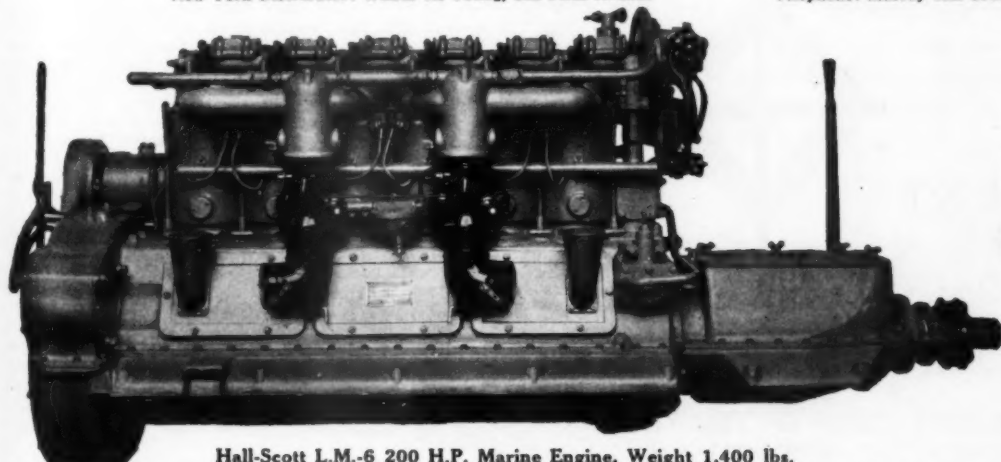
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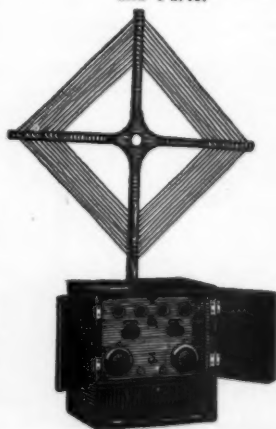
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Easiest for the Amateur

(Continued from page 38)

show carvel and clinker planking and the way that planking butts must be separated so that no butts in adjoining planks come nearer than three frame spaces and butts in the same frame must be separated by at least two through planks.

W. C. T. New York, N. Y.

Best Methods Illustrated

THE accompanying sketches indicate the best method of planking a boat. Figures 1, 2 and 3 are photographs of a half inch scale model planked with heavy paper. The keel, stem, sheerplank and each alternate plank is black so as to make it show up clearly.

In planking the first thing to do is to get out and fit the garboard plank. Have a spiling staff consisting of a piece of straight clear white pine about $\frac{1}{2} \times 3$ inches and as long as the planking boards, clamp the staff against each rib, fairly close to the rabbet, without forcing or springing it edgewise. Now scribe the curve or shape of the rabbet to the staff. With a pair of compasses measure and mark a convenient equal distance, at each rib, from the rabbet to the face of the staff. Remove the staff and place it on the plank to be used. Scribe the marks to the plank. With small brads on the marks and with a straight smooth batten mark a neat fair line full length. Cut and plane on the line. All seams should be made snug on the inside and open on the outside so as to receive and hold the caulking properly. If the rabbet is cut properly the edge of the plank will be very nearly square. Now cut and bevel the other edge of the garboard. The edge may be a straight line or may be curved, the amount of which depends on the amount of curve in the other edge.

When the plank fits properly use it as a pattern for plank on the other side of the boat. But be sure to reverse the bevels so that one is right and the other is left.

Now secure the garboards. The best method of fastening varies. A boat with heavy ribs may have hot galvanized iron nails (not electro-plated). With light ribs copper rivets or brass screws may be used. All fastening holes should be counter bored and plugged with wood plugs set in white lead.

Now determine the position of the sheer line on the frame; scribe to batten and to plank. The sheer plank may have an equal width full length or may be tapered. If it is to be tapered, the taper and the width of the plank may be determined as hereinafter described for the remainder of the planking. It would perhaps be well to make the sheer plank an inch or so wider than the planking.

To determine the width of the planking, take a light batten about $3-16 \times 1$ inch and bend it along the rib having the greatest distance between the sheer plank and the garboard; mark these two points; measure with a rule; decide on the width and number of planks required to best suit the planking material. On the model shown the distance was 69 inches and it required 12 planks $5\frac{3}{4}$ inches wide. Now make a planking scale out of the batten; divide the distance between the two points into $5\frac{3}{4}$ divisions and the divisions into eighths. Fig. 4. These divisions will represent inches and fractions. Any space at any rib measured with the planking scale between the garboard and the sheer plank will give the width of the planks at that rib.

If it is desired to mark the position of all the plank edges or seams on the ribs a very exact method is as follows: Take the batten with the two points on it and lay the distance out on a clean smooth floor. Draw a triangle with the batten distance as the base and the apex opposite the center of the base and about twice the length of the batten away. Divide the base exactly into the number of parts corresponding to the number of planks to be used; draw lines from each point to the apex. A measurement taken with a batten between the sheer plank and the garboard at any rib and laid between the outside lines of the triangle parallel to the base will permit the spotting of the exact widths of all the planks at one time to the batten which may be transferred to that rib.

Now scribe the next plank to be applied; measure the various widths as spotted or as given by the planking scale.

A. G. W. College Point, N. Y.

Careful Work Required

THE second boat planked by the amateur is very often the better, although a number of good jobs have been turned out by the fellow who undertakes to set up and plank his own boat. By following a few simple instructions there is no reason why the amateur cannot make a first class job of the planking.

(Continued on page 72)



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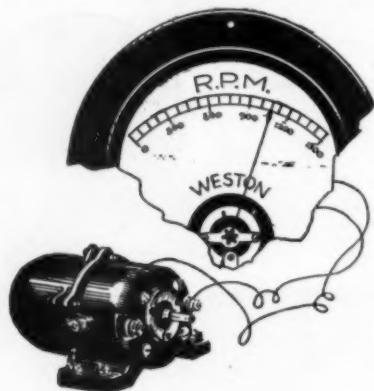
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Careful Work Required

(Continued from page 70)

The smaller type of boat such as the runabout or open skiff can be planked upside-down to advantage, due to the garboard or plank next to the keel being the most difficult to fit.

Before starting it is of course assumed that the builder has selected his material to suit the job, and has decided on a certain maximum width to suit the boat, and that he has rabbeted the keel and stem for the garboard. It is well that the frame be sighted up to make sure it is fair. It is also essential that all the screw clamps in the locality be borrowed, as all will be needed.

To get the correct shape of the garboard plank use a piece of wide bass or template wood 3-16 to $\frac{1}{4}$ inch thick, lay it along the rabbet line of the keel and cut it out to somewhere near the shape the garboard is to be, after which tack it in place with brads, so that the edge which has been cut out, is parallel to, and about, say $\frac{3}{4}$ inches from the rabbet line, all the way along. Using a pair of dividers set at say $1\frac{1}{2}$ inches spot off every 2 or 3 inches along rabbet line, with one point on the rabbet line, and with the other make an impression in the batten, as shown by sketch. Taking the batten off and laying same on the board the garboard is to be cut from, the exact curvature can be determined by spotting off from the impressions on the batten to the board, by use of the dividers set same distance, or in this case $1\frac{1}{2}$ inches.

It is better to keep this plank the same width the entire

length of the boat, so as not to get too narrow a place for fastening at the stem and stern, as in most boats quite a twist occurs where the garboard meets the stem.

The sheer strake can be gotten out next by following the designed sheer line of the boat at the top, holding to the maximum width of plank about midships, and tapering forward and aft or cutting same width the entire length. The curvature can be determined with a piece of template board. It is best to use fairly wide planks in boats that are not too shapely, but in fine lined boats narrow planks make the best job.

After the garboard and sheerstrake have been fitted, the balance will be tapered forward and aft, the exact widths of which can be gotten at each frame by laying off the girths of the frames and dividing them (girths) by the number of planks that are to be fitted, as shown, starting with the amidship or greatest section of the boat. By laying a piece of template wood along the edge of the garboard and spotting off, the curvature of the next plank can be gotten, and so on. The same thing applies to the plank next to the sheerstrake and on down until the last or take-up plank, which is laid out from a template made by tacking a piece of template wood over the place the plank is to fit, allowing it to lap over the planks already fitted an inch or so each side, and running a lead pencil along from the inside of the boat.

It is very important to remember that the widths as developed and shown at A in the sketch, are for the inside surfaces of the planks only, and that the widths for the outside surfaces will be greater in such places as in the turn of the bilge, and less as in the flare of the bow. The correct widths for the outside surfaces can be gotten by tacking a strip of wood (same thickness as planking) on the frames, divide the girths and spot off as before.

For a cruiser or large boat with plenty of freeboard, two or three planks with same width entire length could be fitted from the sheerstrake down, and two or three from the garboard up, and then the method shown at A in the sketch, used to get correct widths for the balance of the planks. This of course will be governed by the design of the boat that is to be planked, and should not be done if it causes the tapered planks to come too narrow at the ends where they fasten to the stem and stern.

The easiest and most used form of planking is to fit the edge of one plank squarely to the edge of the other, taking a thin shaving off the outer edge of each plank to form a Vee for caulking. This makes a good tight fit on the inside edges, as shown at D in the sketch. In places where much shape or turns occur such as in the tumble home of the stern, the turn of the bilge and the flare of the bow; the planks must be planed convex or concave to suit the radius of the frame, as shown at D in the sketch.

If the amateur's shop is not fitted with a regular steam box, for bending, one can easily be rigged up by using a second hand hot water boiler, or tank of any kind, half filled with water, and piped up to a wood box so steam can exhaust into it, after a fire has been built under the tank. Steamed planks can be fitted much easier and there is less danger of breaking and spoiling so many.

Have as few butts as possible in the planking. In very small boats they can be eliminated entirely, but cedar especially cannot be gotten in lengths long enough for the average cruiser without butting. All butt blocks should be of oak, fitted tight from frame to frame, and cut $\frac{1}{2}$ to 1 inch wider than the planks, as shown at C in the sketch, and of course have no two near each other.

Copper rivets and burrs seem to be the preferred fastenings for planking to frames, are quite expensive, and take considerable more time to fit. They may be much the better fastening for the runabout or light boat, but for the heavier boat with cypress or cedar planking and heavy oak frame the galvanized nail clinched, has some holding qualities that are explained better by removing one after it has been driven into a piece of oak. Bore through the plank and part way through the frame with a drill slightly less in diameter than the nail, then counterbore the plank for the head of the nail, and a wood plug, the latter should be of same material as planking and should be dipped in white lead before driving on.

In all places where wood to wood fits or joints are made, the surfaces should be painted with thick white lead paint, such as edges of planking, under butts, along rabbet line of keel and stem, and where planks meet stern or transom.

E. T. K., Wilmington, Del.

Contributors to the Prize Contest conducted each month in MOTOR BOATING should be careful to observe the instructions which are printed on page 37 of this issue. All drawings should be neatly made and the instructions concerning the ordering of prizes followed.



MIAMI BEACH

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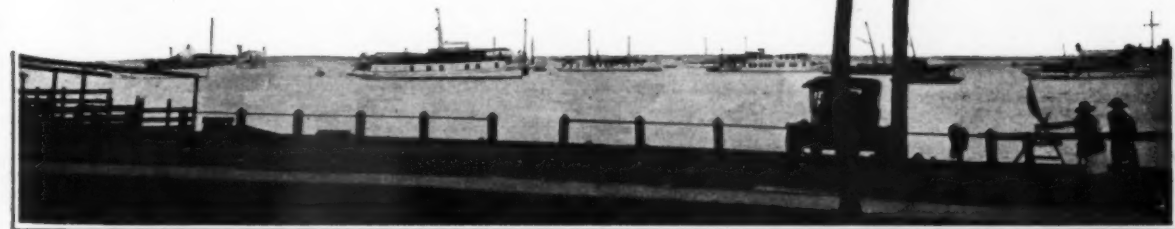
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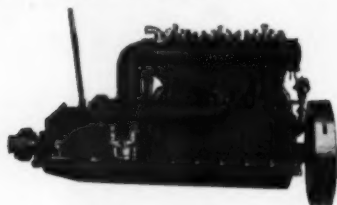
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Imp, A Smart Runabout

(Continued from page 41)

The little Universal motor which is specified on this boat will make a most desirable power plant, and will turn a three blade propeller at 13 inches diameter and 14 inches pitch at about 1,000 revolutions. This is sufficient to give this little boat a speed of about 11 to 12 m. p. h. which is very good considering the low power of the plant. It is not advisable to install more power, or a machine of greater weight in this little boat, as excessive power will cause the boat to change its trim and its performance will not be as satisfactory as will otherwise be the case.

Any question or difficulties which may arise during the construction of this little boat can be referred to the Editor of *Motor Boating*, or should any one desire larger reproductions of these drawings, they can be secured at moderate cost by addressing F. W. Horenburger, 4263 Byron Avenue, Bronx, N. Y. The specifications which follow will give particulars on many further details of the construction.

SPECIFICATIONS

The principal dimensions for this boat will be length-over-all 18 feet, beam-over-all 5 feet, draft 1 foot 6 inches, and horse-power 12.

Keel: This member is to be of yellow pine in one piece from stem to stern. It will be sided $1\frac{1}{2}$ inches at the stern and tapered and molded as per drawing. It is to be about 4 inches at the rabbet where the shaft comes through.

Stem: The stem will be of white oak sided $1\frac{1}{2}$ inches and molded as per drawings with a hook scarf to the keel. It should be securely bolted to the keel with $\frac{3}{8}$ -inch galvanized bolts and properly rabbeted to suit the planking. The forward edge is to be pointed down to a $\frac{1}{8}$ -inch space.

Transom: This will be of 3 ply mahogany and of the curved type. The total thickness is to be $\frac{3}{8}$ inch all glued together with waterproof glue and bent over a form to shape. There will be a hackmatack knee bolted to the keel, and oak knees at each outboard corner. Suitable cleats at the top and bottom of the transom should be fitted as well as a sawn cleat at the edges. The transom should be entirely screw fastened, all holes being counterbored and wood plugged.

Sawn Frames: There will be a white oak sawn frame at each station about 3 feet on centers, and as shown on the

plans, sided $\frac{7}{8}$ inch, and molded $1\frac{1}{2}$ inches at the top, and $2\frac{1}{2}$ inches at the bilge. The heel to be as shown on the plans. The side and bottom members may be halved into each other, and securely fastened with number 8 copper rivets. Frames are to be joined with an oak floor tie which may be either rivet or bolt fastened to the frames with at least four fastenings on each side and through bolted to the keel with $\frac{3}{8}$ -inch bolts. Floors are to be of a sufficient height to take engine girders of $1\frac{1}{4}$ -inch thickness.

Bent Frames: The intermediate bent frames are to be of $\frac{3}{8}$ -inch square white oak, steam bent into position, and spaced about 7 inches on centers as shown on the plan.

Frame in General: After the frames and clamps have been fastened into place, the entire frame is trimmed by beveling the frames in line with the stringers. A small pine plug acting as a stop water should be fitted where the seam comes in the stem and keel. All timbers in the frame should be painted before the fastenings are made.

Planking: All planking will be of 9/16-inch Philippine mahogany, and light and clear, and in as long lengths as practical. On a little boat like this it should be possible to get the plank long enough so that they can all be in one piece. All planking is to be fastened to the stem, keel, chine, transom, and frames, with screws. Use $1\frac{1}{4}$ -inch number 8 galvanized screws on frames, stem, and stern, and 1-inch number 8 on keel and chines, and $\frac{7}{8}$ -inch number 8 on sheer. Planking is to be copper riveted through the steam bent frames. Holes to be counterbored and wood plugged. Seams are to be lightly caulked with spun cotton, which should be rolled in and not hammered.

Floor Timbers: These are to be of $\frac{3}{8}$ -inch oak on the sawn frames as shown in the drawings, while the intermediate floor can be of $\frac{3}{4}$ -inch spruce amidships, and about $\frac{3}{8}$ -inch spruce at the forward and after ends.

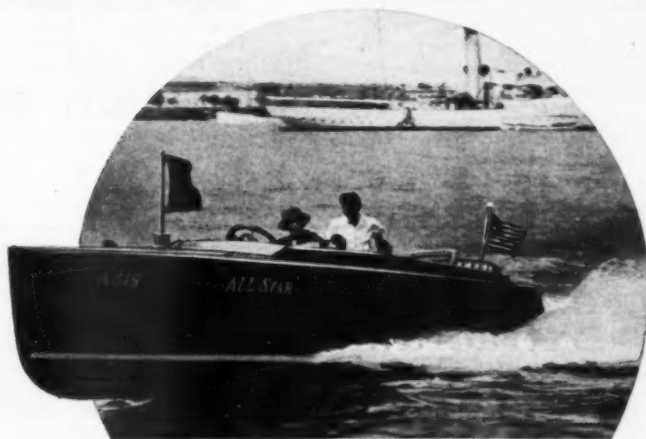
Clamp: The clamp will be of $\frac{3}{4}$ by $2\frac{1}{4}$ -inch yellow pine in one length, of absolutely clear stock, and tapered at the ends to $\frac{3}{4}$ by $2\frac{1}{8}$ inches. It is to be fastened to the stem and transom with a breast hook or knee. It is to be let into the frames properly faired and screw fastened.

Hogging Girder: This will be one length of clear yellow pine $\frac{3}{4}$ by $2\frac{1}{2}$ inches tapered to $\frac{3}{4}$ by $2\frac{1}{2}$ inches at the ends. It shall be securely screw fastened to the frames in a similar manner to the clamp.

(Continued on page 84)

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A Smith-Built Standardized Runabout at a Remarkably Low Price

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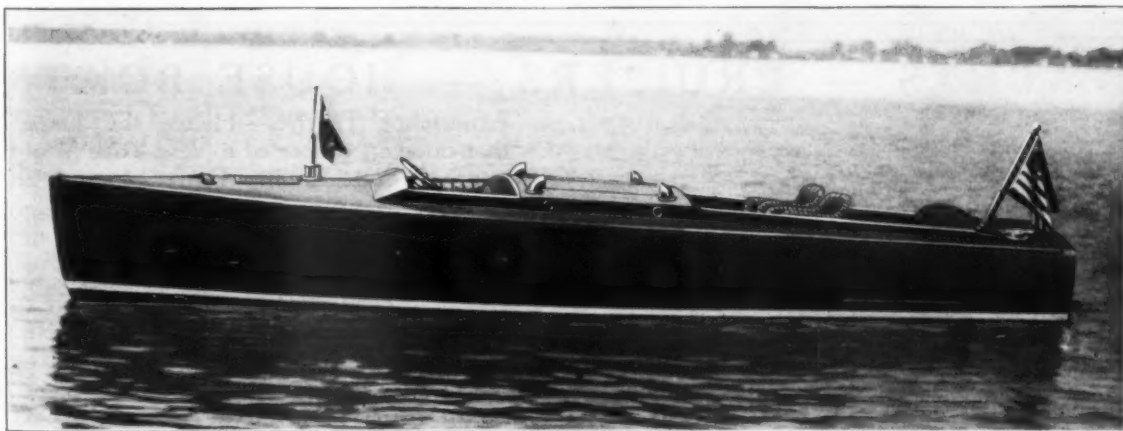
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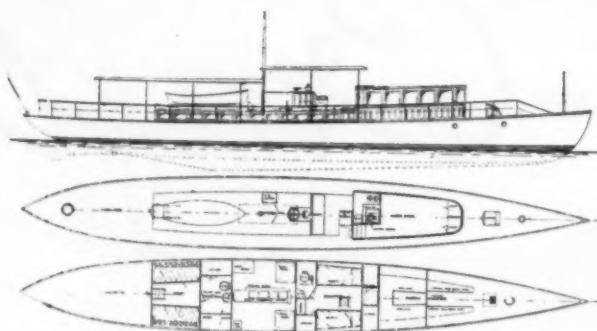
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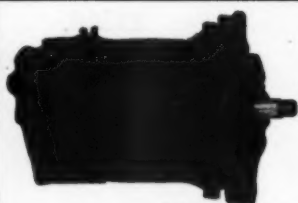
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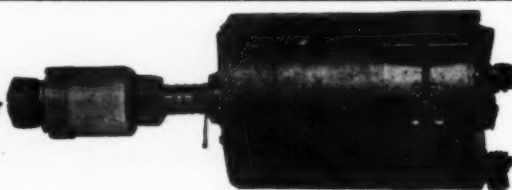
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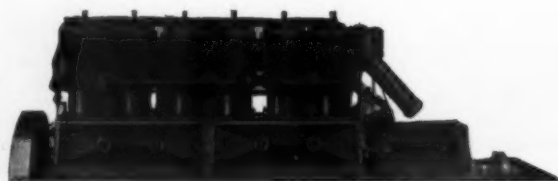


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400 to 500 R. P. M.	4 cyl. 50-60 B. H. P.
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Four cycle, Bore 6½",	
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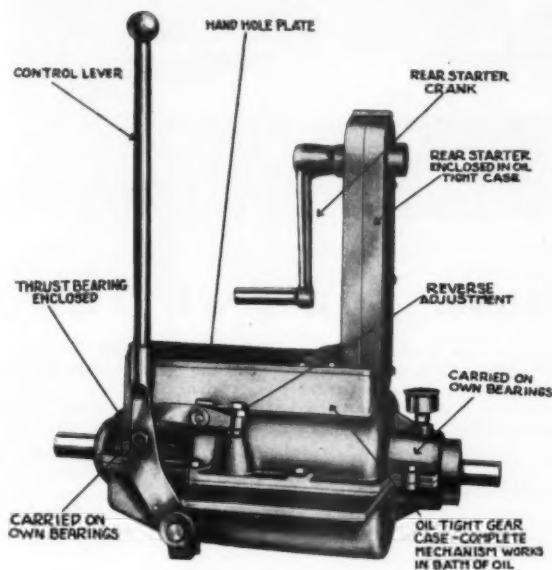
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- Mechanism works in bath of oil.
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We make a special gear for 100 H.P. Hall Scott and similar high speed motors.

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Study these extraordinary features of the Syracuse







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A patented piston check valve controlled by an adjustable spring is lifted by the explosion in the cylinder, allowing burned gas to pass around the piston. Before the gas reaches the whistle tank it comes in contact with water-cooled walls and is further cooled by passing through ten feet of tubing. The compressor is water-jacketed, and cannot overheat.

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A CRUISER BARGAIN

39' 9" x 10' x 2' 6"

Accommodations equal to 50-footer. White cedar planking, copper fastened, mahogany trim. Large enclosed deckhouse dining saloon, all mahogany. Forward cabin with fully equipped galley. Next aft a cabin for two persons. Large light engine room amidships. 225 H.P. Sterling engine—20 real miles per hour. Owner's state-room aft with two large double berths, toilet room, dresser, lockers, etc., beautifully furnished.

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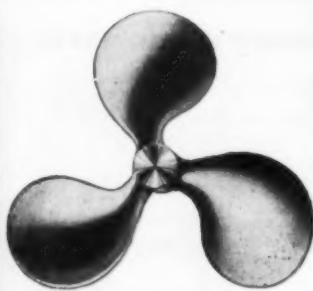
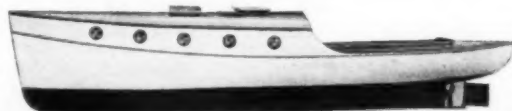
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Beautiful New Raised
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Our new 64 page catalog with over 55 designs to choose from, such as tenders, row, sail, OUTBOARD motor boats to a HYDROPLANE RUNABOUT, V bottom RUNABOUT or SEA-GOING CRUISER covers everything in detail. Send 25c. today for your copy; we can save you money.

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For 21 Years Have Been Efficient, Dependable, Durable

Our Service Department will be glad to help you with any or all of your propeller problems. Use the coupon

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Water line length.....
Beam
Construction (light, heavy, med.)
Make of engine.....
H. P.....R.P.M.....
Present speed
Present wheel
Present R.P.M.
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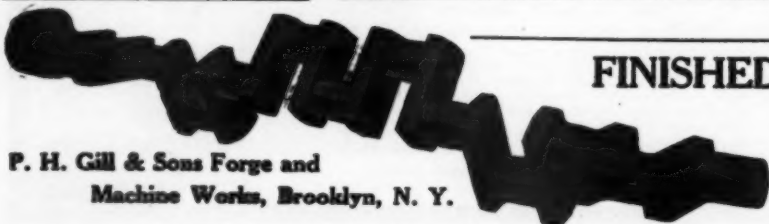
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Write today for complete catalog and Prices.

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CHICAGO

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Post Light with
Red and Green
Lenses

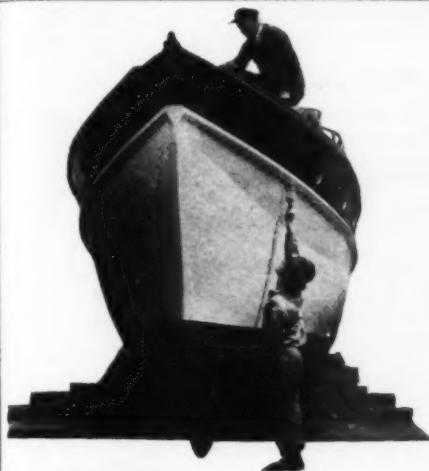


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FINISHED CRANK SHAFTS

We are furnishing them to some of the leading marine engine builders. Carbon and Alloy Steel, Heat Treated to your own specifications. We grind all Pins and Bearings. Forged, machined, and finished complete in our own plant. Let us quote you.

Advertising Index will be found on page 123



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Top and Bottom Paints

for Everything that Floats

"NEW JERSEY" COPPER PAINTS are made to resist teredos and marine growth, and they produce a finish that will increase the speed of your boat.

"NEW JERSEY" YACHT WHITE has been specified and used on the largest and finest yachts afloat. Retains its whiteness and will stand scrubbing.

"NEW JERSEY" SPAR VARNISH will stand up under all kinds of weather conditions, hold its lustre and give absolute satisfaction.

SOLD BY ALL LEADING DEALERS—OR WRITE DIRECT TO US.

Write for booklet—"Davy Jones' Locker" giving valuable information on painting; sent without cost to you.



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All Quotations
Subject to
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60% IN POWER AND FUEL

BY OUR PATENT
BOAT and SHIP
FORM. Price and finish same and
built by any concern you select.

All orders must be sent to
A. F. HAMACEK MARINE CORPORATION
4645 BROADWAY - CHICAGO, ILL.

Netherlands a Market for Outboard Motors

There is a very good market in the Netherlands for outboard motors, say the office of the Commercial Attache at The Hague, and their sale could be greatly increased if manufacturers would plan an extensive advertising campaign in co-operating with their resident agents. In the past, sales have been made from the catalogs, but the only practical sales method is to have a proper stock in the hands of a dealer for inspection by prospective purchasers and for demonstration purposes.

Motors shipped in this market should in all cases be equipped with magneto instead of battery ignition, which is generally disliked by the Dutch. However, it is very desirable to be able to steer a boat not only with the rudder but also through the medium of the propeller, and such a feature should materially aid the sale of a particular make. Without it, it is frequently almost impossible to navigate and effect complete turns in the narrow waterways and canals of the country.

Erd Motor Company Changes

Due to the recent death of Benjamin G. Appleby, former president of the Erd Motors Corporation of Saginaw, Mich., it has been necessary to elect a successor, who is W. A. Carrell, who is now serving as President, Treasurer and General Manager. The Erd Motors Corporation has been entirely reorganized with new capital, and will shortly announce new, complete line of marine, industrial, truck and tractor motors in several sizes. This company has been established in 1898, is one of the oldest motor manufacturers in the country. Prior to the death of Mr. Appleby, Mr. Carrell was Vice-President and General Manager of the concern. He has been associated in an executive and engineering capacity with several prominent motor building companies, among which can be mentioned the Supreme Motors Corporation, the Wisconsin Motor Company, Beaver Motor Company and International Harvester Company.

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\$179⁰⁰

Over 20 years of marine motor experience are back of this newest Roberts Motor, Model "J." It is a four cylinder, four cycle motor, 3 $\frac{3}{4}$ " bore by 4" stroke. All moving parts are interchangeable with standard Ford motor parts, obtainable throughout the world.

The Lowest Priced Marine Engine of Its Type

Our policy of selling for cash enables us to supply this engine for \$179.00, completely equipped as shown.



If you want one this spring, get in touch with us. Write or wire today for full details.

ROBERTS MOTORS, Sandusky, Ohio

Imp, A Smart Runabout

(Continued from page 74)

Shelf: The shelf will be a piece of clear Oregon pine 1 $\frac{1}{2}$ by 1 $\frac{1}{4}$ inches, and shall be slightly tapered at the ends and sufficiently wider in the way of the cockpit coaming to allow the coaming to be secured to it directly. It shall be shaped to fit and carefully fastened throughout its length.

Chine: The chine is to be in two sections, an inner and outer member of clear yellow pine, in a single length from stem to stern. They are to be tapered and trimmed to suit and securely screw fastened to the stem with screws and reinforced with a substantial knee. Fastenings at the stern should be similar and all rivets to frames should be 3/16-inch rod over burrs.

Deck Beams: The main deck beams are to be of $\frac{3}{4}$ by 1 $\frac{3}{4}$ -inch white oak, and are to be flush with the frames. Intermediate beams are to be $\frac{3}{8}$ by 1 $\frac{3}{4}$ -inch spruce and slightly notched into the clamp. Hatch framing shall be $\frac{3}{4}$ by 2 $\frac{1}{4}$ -inch with a trimmer of the same size, and the hatch cover frame to be $\frac{3}{4}$ by 1 $\frac{1}{2}$ -inch white wood. Small beams $\frac{3}{8}$ by 1 $\frac{1}{2}$ inches.

Bulkheads: These are to be located as called for, and made of double thickness of cedar 3/16 inch thick, laid diagonally in opposite directions with light canvas between, and all properly fastened together with copper rivets or clinch nails.

Deck: This is to be of $\frac{3}{8}$ T & G cedar covered with canvas laid in marine glue. Hatch covers over motor to be of $\frac{3}{8}$ -inch mahogany fastened to the frame previously mentioned.

Cockpit: This is to be of a size and located as indicated on the construction drawing and fitted with two seats as shown. A dash board for mounting the steering wheel and such instruments as may be necessary shall be built in to suit, and a little coaming of $\frac{1}{2}$ -inch mahogany fitted in place all around and capped with a neat mahogany cap moulding. It shall be of such a height as is indicated on the drawing and properly trimmed and smoothed down.

Rudder, Stock and Quadrant: A rudder of a general size and shape as shown on the drawings shall be made and fitted, consisting of two 3/32-inch brass plates riveted to a bronze rudder stock 1 $\frac{1}{2}$ inches in diameter. The edges of the rudder plates are likewise to be riveted together and all rivets trimmed smooth on the outside. The rudder stock is to

have a proper keyway to suit the quadrant, and to have a squared head to fit an emergency tiller which shall also be provided. The head is to project to the underside of the decking and a brass hand hole plate of about 4 inches diameter shall be fitted centrally over the rudder stock. The rudder post is to be of 1 $\frac{1}{2}$ -inch standard brass pipe, securely fastened to the keel with a lock nut on the in and out sides with suitable gaskets between. The quadrant will be a bronze casting of about a 12-inch radius and having a double score to take the wire steering cables leading from the steering wheel.

Steering Gear: The steering gear will be a 17-inch mahogany rimmed automobile type with a bronze rack and pinion properly fastened to the forward side of the control bulkhead and fitted with spark and throttle controls on the steering wheel. Connecting cables should be of $\frac{1}{4}$ -inch bronze steering cable, leading over suitable 3-inch bronze sheaves, and fair leads, with a turn buckle for taking up the slack.

Engine Beds: These are to be of 1 $\frac{3}{4}$ -inch yellow pine extending from the forward bulkhead aft, as shown, and aligned and drilled to receive the bed plate of the four cylinder Universal marine engine.

Deck Fittings: There will be standard marine hardware as follows, supplied and fitted into place: 1 bronze closed chock forward on stem head, one 1 $\frac{1}{4}$ -inch flag pole socket forward, one 4 $\frac{1}{2}$ -inch brass cowl ventilator, one klaxon horn mounted on deck, two open pattern bronze chocks aft, one 1 $\frac{1}{2}$ -inch flag pole socket aft, one 4-inch hand hole, one 1 $\frac{1}{4}$ -inch mahogany flag pole forward, and one 1 $\frac{1}{2}$ -inch mahogany flag pole aft arranged to carry an electric stern light on its tip, one 8-inch brass cleat on the forward deck, and one 6-inch brass cleat on the after deck with two 3-inch brass cleats on the plank sheer for securing fenders.

Equipment: Full equipment as required by the Federal regulations shall be supplied as well as the following items: one 20 lb. folding galvanized anchor, one 2-inch circumference three strand manila anchor line 30 fathoms long, and two 1 $\frac{1}{4}$ -inch circumference three strand manila lines 5 fathoms long, two 5-inch by 14-inch cotton rope fenders, and one 6-foot brass boat hook. The electric side lights may be either two individual lights built into the coaming as shown, or may be a combination class 1 light mounted on the forward deck. The stern light will be on the after flag pole and is

(Continued on page 122)



"Port Elco," the handsome Elco showroom at Park Avenue and 46th Street, New York City, adjoining Grand Central Palace where all the motor boat shows of recent years have been held.

Making It Easy to Buy

A New Way of selling Boats Which
Has Already Made Good in New York

By Walter F. Bailey

IN all the modern psychology of salesmanship there is nothing more important than the homely thought that successful selling is largely a question of making your goods "easy to buy." It sounds obviously simple that way but it is surprising how many cases you can point out where this angle has been apparently overlooked.

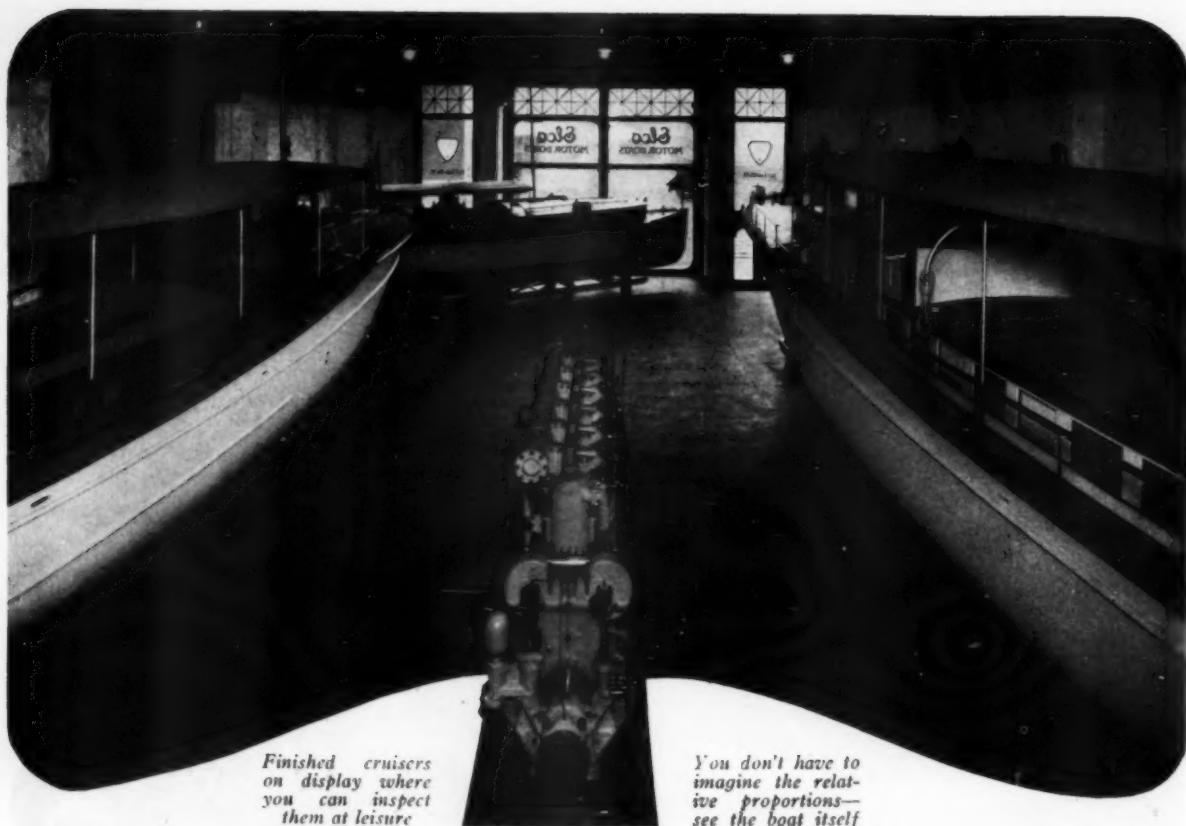
Certainly motor boats and yachts have not been easy

to buy. The acquisition of a new boat has generally been a long drawn out affair, from the first flash of desire to the time when you were ready to set out on the maiden cruise, all equipped and prepared for any eventuality.

This is no reflection on the average small boat builder of the past, who has generally been an honest craftsman who knew a great deal about how to build a boat and very

The Elco Deck House Cruiser. One of these big 56 foot twin screw motor yachts is on display at Port Elco.





*Finished cruisers
on display where
you can inspect
them at leisure*

*You don't have to
imagine the relat-
ive proportions—
see the boat itself*

little about how to sell it. He seldom had the capital to carry a stock of finished or even partially finished boats, to say nothing of undertaking the expense of a salesroom in a convenient location, entirely separate from his shop or yard.

Again this average builder had to fill his shop with work by building a different size or type of boat for every customer and this meant that each boat was built to order, an original creation from start to finish, constructed according to the ideas and under the general supervision of the prospective owner.

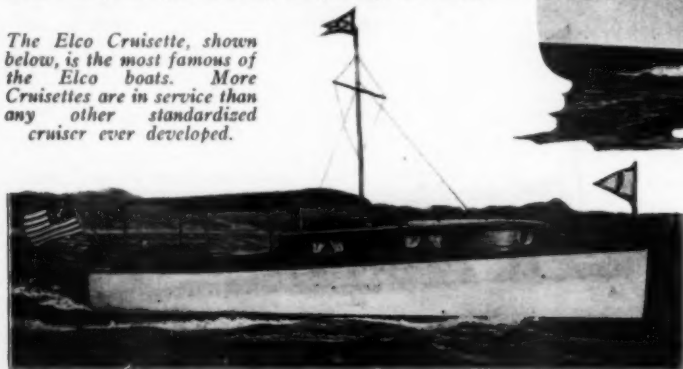
If automobiles were built to order, there would not be many cars on the streets today. If you had to supervise the design and construction of your own car, you probably wouldn't bother to own one. So it's a remarkable proof of the attractiveness of boating that, in spite of all obstacles, there are more than half a million motor boats in service today, and a comfortable increase each succeeding year.

When every would be boat buyer throughout the country can order a boat as easily as he can order a new car, and get delivery as quickly, the motor

boats will be numbered in the millions. I say "throughout the country" because the boat buyer in New York can do this right now. He can go to a centrally located showroom, take his pick of several finished boats on display and arrange for delivery on a specified date. He doesn't have to bother with plans or specifications or construction details because all that has been done for him. He is told the cost to a cent, without any indefinite estimates or extras. All the difficulties of buying a boat have been eliminated for him. At last a boat has been made easy to buy.

This in short is the idea behind Port Elco and the way it has worked out in practice. The Elco Works have established a handsome permanent showroom at Park Avenue and 46th Street, in the heart of New York's hotel and shopping district. And the success of Port Elco is

*The Elco Cruisette, shown
below, is the most famous of
the Elco boats. More
Cruisettes are in service than
any other standardized
cruiser ever developed.*



*The Elco Veedette above is a
15 mile cruiser, 30' 11" x 8' 2".
It combines the speed and econ-
omy of a runabout with the
accommodations and capacity
of a cruising type.*

shown by the constant stream of visitors and by the number of big boats sold there.

It is the only big boat showroom in the world. That is perfectly natural because none but the largest boat building organization in the industry could afford to undertake a salesroom on such a scale and in such a location. With more than fifty thousand dollars worth of boats constantly on display it requires not only large capital but large production to justify the investment.

Visitors at Port Elco have run as high as five hundred in a single week. One month's record shows people hailing from twenty-two different states and three or four foreign countries. These figures indicate the public's interest in boats and its appreciation of the opportunity to inspect a big cruiser or yacht at one's leisure.

Looking over a boat at Port Elco is very different from the hurried view you get at the annual motor boat show. You can take a whole day if you wish and the attendants are glad to explain every detail of design, construction and equipment. Even a boatman of long experience cannot discover and appreciate all the features of a craft in a short inspection but it is a pleasure to study the fine points of arrangement under these conditions.

Compare this with the ordinary process of buying a boat. If you don't happen to start with a builder who has a well developed standardized design of the type you want, the first step is a long study of sketches, photos, plans and blueprints. This may be fun for the mechanically inclined or for the man familiar with construction work but it takes time and delays the actual building operations. Then comes the long process of building the boat, watching it grow under the workmen's expert hands. Again this supervision may be enjoyed by the expectant owner but it still takes time and postpones the day when the boat will be ready for use.

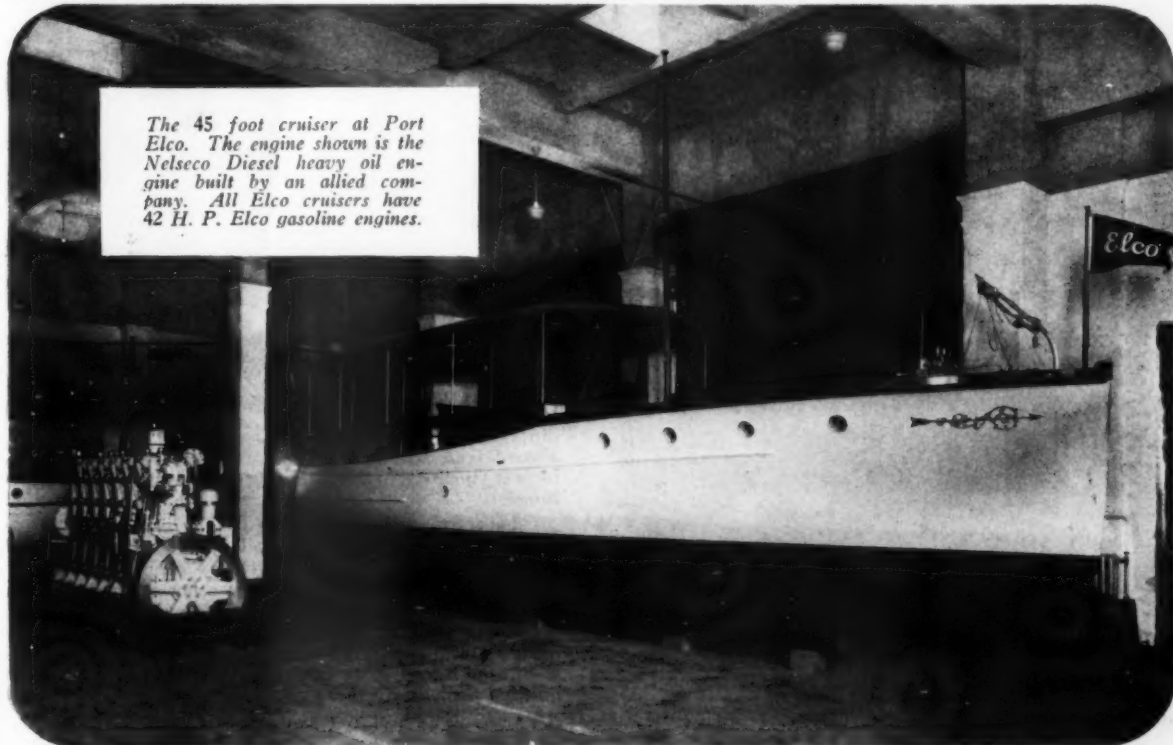
This method is perfectly satisfactory to the man who likes to watch details, who has plenty of time on his hands and who is willing to wait several weeks or months for the delivery of the boat after he has decided to buy one. But most of the people who buy cruisers today are men whose own time is too valuable to devote to such things, and it isn't human nature to be willing to wait with calm resignation for the arrival of anything so alluring as a new cruiser.



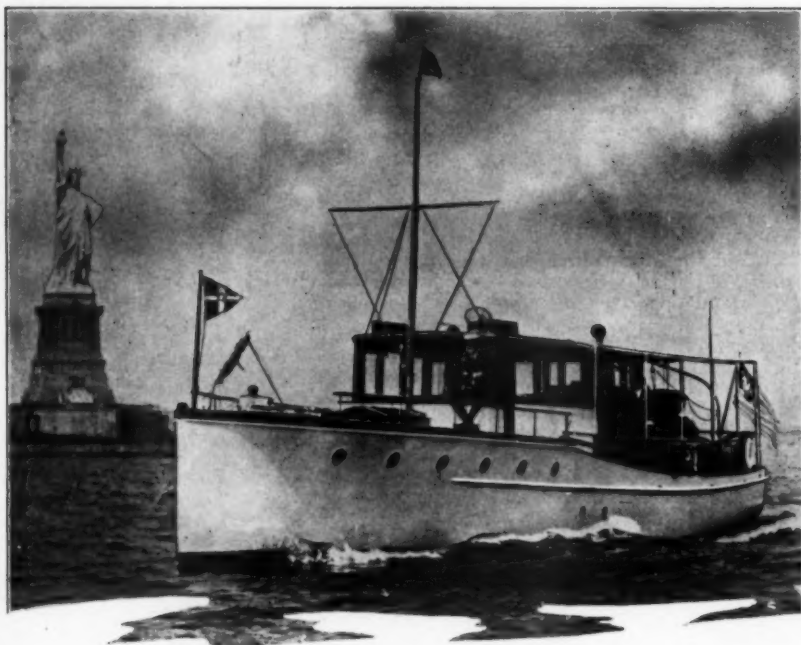
The owner's stateroom in the 45 foot cruiser is as large and complete as the staterooms in yachts of twice its size

If you have ever been through the ordeal of having built for you a new house or a new boat or a new machine of some kind, you probably know the unexpected difficulties and delays that present themselves one after another, trivial little mistakes and annoyances that are all in the day's work for the philosophical builder but sources of nerve wracking worry for the deeply interested owner. In successful business and manufacturing establishments these troubles are avoided by systematizing and standardizing each operation until everything runs with clocklike regularity.

That suggests another attractive feature of the Elco proposition. You are spared all worries about details because you know they build more boats and have bigger plant facilities than any other boat builder. They have the financial ability to carry through a program of standardization and quantity production which cannot help but produce a better boat for the money than is possible with single production.



The 45 foot cruiser at Port Elco. The engine shown is the Nelsco Diesel heavy oil engine built by an allied company. All Elco cruisers have 42 H. P. Elco gasoline engines.



This 56 foot cruiser is driven 12 miles an hour by a twin-screw installation of Elco gasoline engines.

Their method of standardization not only improves the design and the quality of workmanship and lowers the cost of building but it means that several boats of each type are always under construction. Even at the busiest season a boat can be built complete from the laying of the keel to the last detail of finish in much less time than is required in a shop where every operation and every piece of material is not thoroughly standardized.

You will find other advantages resulting from standardization when you inspect these big cruisers. Repeated building from one design gives an opportunity to develop little refinements here and there, improvements in arrangement and simplifications of equipment that add immeasurably to the practical convenience of the boat. The evidence of good architecture, be it a house or a boat, is not simply in combining all the conceivable features and advantages but in coordinating and harmonizing these advantages so they occupy the minimum of space. Thus by skilful arrangement the accommodations of a forty-five footer can be made practically equivalent to those of the average fifty to sixty foot boat.

This matter of standardization has been a subject of argument in the boating industry for years—a one sided argument at that, because there is no denying the advantages if you take a concrete example like one of the Elco cruisers and compare

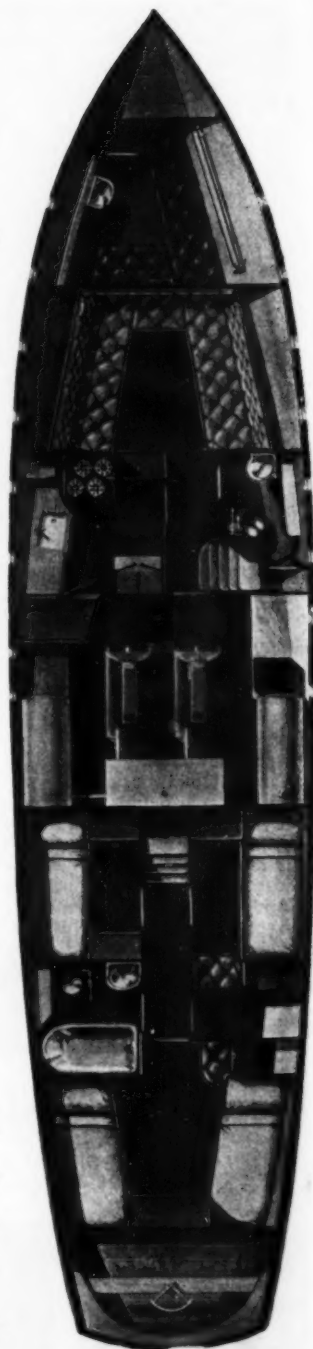
it in accommodations and cost with any non-standardized boat of similar size. While the data for such a comparison is often difficult to secure and great allowances must be made for differences in quality of workmanship and finish, even a novice in boating and building can see the difference if he can go aboard both boats and inspect them at close range.

I look forward to the day when every large city and many of the smaller ones will have at least one big salesroom devoted to the display of motor boats. That is only a dream of the future but in the meantime Port Elco is at your service if you live near New York or if an occasional business or pleasure trip brings you to the big city. The next time you have an opportunity drop in at Port Elco and see if it doesn't quicken your desire to own a big cruiser.

MoToR BoatinG Advertiser.



In the deckhouse of the large Elco cruiser,—such a deckhouse as you find on boats of 100 feet and over.



In the Elco catalogs the arrangement of each boat is vividly shown by a scale drawing like this, as easy to understand as a photograph.

50 Miles Guaranteed
Powered with 450 H.P. Gar Wood Liberty
Marine Motor (1650 cu. in.). This is the same
power plant that has won all of Gar Wood's
races and records during the past two years.
Speed of 50 miles per hour guaranteed on 50
mile trial.

NEW 1924 MODEL

Baby Car
World's
Fastest Runabout
Winner in every race of its class

Decide now to own a duplicate of the original Baby Car, fully guaranteed in speed, workmanship and every other detail of hull, power plant and equipment. You'll be sure of a successful boat, skimming over the water at 45 or 50 miles an hour. Built by the same men who have produced many of the world's fastest and most famous boats such as Miss Chicago, Baby Car I and II, Gar Jr. I and II, Miss Chicago, Baby Car and many others. Stock-boat to own, always a source of satisfaction.

**50 Miles
Guaranteed**

Baby Cars are standardized and ready for quick delivery.

Write or wire today for literature.

Built by **GAR WOOD, Inc.**

Offices: 409 Connecticut Ave., Detroit, Mich.

New York and Eastern Distributor
FOR DEMONSTRATION WRITE OR WIRE

HOWARD W. LYON,
725 EAST 135th STREET, NEW YORK, N. Y.
MELROSE 1312 and 1313.

MOTOR BOATING PRACTICAL HAND-BOOKS

Every motor boatman has long felt the need for a really complete and comprehensive library devoted to his favorite pastime—motor boating. One of the obstacles to the accomplishment of this important work was the difficulty in finding any one writer who could cover the field in its entirety. In presenting the new series of practical hand-books, MoToR BoatinG believes that the problem has been solved at last. These books are edited by Charles F. Chapman, M. E., the editor of MoToR BoatinG, and they are the results of months of untiring effort on his part, together with the best of thousands of suggestions sent to him by motor boatmen themselves. The list of the contents given below will give you some idea of the vast amount of ground covered by these volumes.

Practical Motor Boats and Their Equipment

Volume 1.—The first volume tells you what the ideal boat for various kinds of service should be and what to look for in buying a boat. Many suggestions about decoration and hints on all kinds of equipment. All about steering gears, wireless outfits, electrical attachments, etc. Glance over the list of contents appended herewith: Hulls, Ballast and Seaworthiness; Round Bottom vs. Sharp Bilge; What Are the Advantages of Flare; Raised Deck vs. Trunk Cabin; Best Proportion of Beam to Length; Selecting a New Design; The Advantage of Bilge Keels; Open or Solid Deadwood? What Makes a Hull Seaworthy? The \$1,000 Cruiser; Buying a Second-Hand Boat; Types of Bows and Sterns; Exterior Arrangement of Cruisers; The Best Cabin Arrangement; Finishing Up the Cabin; Changes in Interior Arrangement; Interior Arrangement for Open Boat; Propeller-Rudder Arrangements; Best Position for the Rudder; Advantages of the Outboard Rudder; Different Steering Positions; Steering Equipments for Motor Boats; Steering Gear for the Cruiser; The Steering Gear for a Runabout; Steering the Boat from the Side; The Electrical Equipment; Making and Wiring a Switchboard; Electric Lighting on a Motor Boat; The Inexpensive Lighting Outfit; Wiring the Small Cruiser; The Storage Battery; The Dynamo Cut-Out; Wireless for a Small Cruiser; Tender for a Thirty-foot Cruiser; Building a Folding Dinghy; Installing the Boat Boom; What is the Best Galley Arrangement; Ventilating the Galley; The Galley Stove and Its Installation; Making a Fireless Cooker; A Portable Cook Box; Running Water for the Cruiser; How to Build a Portable Table; A Table for the Open Boat.

Practical Motor Boat Building

Volume 2.—As its title implies, this volume takes up the building of your own boat. It also covers the construction of the necessary fittings such as awning, windshield, etc. Every boatman some time or other builds a boat, and a book of this kind will save much time and prevent many mistakes. List of contents: Types of Motor Boat Fastenings; Boat Building Woods; Laying Down a Boat's Lines; Converting a Trunk-Cabin Cruiser; A Steam Box for Amateur Builders; Joiner Between Stem and Keel; Fastening the Frames and Floors; Boring the Forgotten Limbers; Fitting the Garboard Plank; Boring the Shaftlog; Fitting the Stuffing Box; The Stern Bearings for a Cruiser; A Water-Tight Companionway; How to Canvas a Deck; Hinged Water-Tight Hatches; Making a Water-Tight Hatch; The Coaming of an Open Boat; Fitting a Swinging Port Light; Making a Self-Bailing Cockpit; A Water-Tight Window Sash; Making a Water-Tight Skylight; How to Build an Engine Housing; How to Make an Engine Cover; Building a Tool Locker; Constructing an Extension Transom; How to Make a Pipe Berth; An Ice Box for a Cruiser; Installing a Toilet; How to Rig a Signal Mast; How to Make a Spray Hood; Fitting a Folding Windshield; An Awning for the Open Boat; A Cover for the Open Cockpit; Screen for the Side Light; A Support for the After Light; A Seat for the Man at the Wheel; Removable Davits for the Cruiser; The Boarding Steps; A Bow Rudder for Your Hydro; The Motor-Driven Club Tender.

Practical Things Motor Boatmen Should Know

Volume 3.—Navigation is one of the important subjects covered in volume three of the series. Tells you how to steer, how to increase the factor of safety, and a host of other things relative to the proper running of your boat. The chart and compass are both fully explained in a clear and comprehensive manner. The list of contents will tell you more about it: Advice for the Beginner, Lessons Learned from Experience; Good Things to Know; Increasing the Factor of Safety; Which Way Should the Boat Steer? Why a Boat Steers Badly; Why Do Boats Squat? Figuring the Boat's Speed; Ballasting the Cruiser; Getting Off-Bottom; To Ride Out a Storm in a Motor Boat; The Why and How of Storm Oil; Preventing Fire; Handling Ground Tackle; Government Charts; Stowing the Anchor on a Cruiser; Diminishing Deviation; Preventing Electrolysis; Stowing and Using Charts; How to Make a Chart Case; Keeping a Motor Boat's Log; How to Make a Sextant; Tides and Tidal Waters; Taking Her Through the Canals; The Best All Round Dinghy; Towing the Tender; Handling the Dory in a Seaway; Getting the Tender Aboard; Planning for a Cruise; Equipping for a Cruise; Equipment for Offshore Cruising; Novel Events for Regatta Day; Handicapping; The Object of a Handicap Rule; Laying Off a Race Course; Measuring the Length of a Race Course; Preparing a Boat's Bottom for a Race; How to Build a Turning Buoy; Starting Boats in a Race; Stowing the Signal Flag; Fitting a Gun Mount; A Fish Box for Your Cruiser; A Cabin Wall Rack.

Practical Marine Motors

Volume 4.—All about the marine motor; what it should and should not be. Tells why the automobile engine is unsuccessful in marine work. The best location for your engine; the ideal engine bed, the fuel tank, exhaust and countless other suggestions that will enable you to get the best results from your power plant. List of contents: Purchasing a Marine Motor; How Many Cylinders? Power Per Cylinder; High Speed vs. Heavy Duty; Long Stroke vs. Short Stroke; Correct Motor Design; Changes in One's Power Plant; The Things that Cause Vibration; The Automobile Engine for a Boat; The Best Position for the Motor; The Ideal Engine Compartment; Placing the Engine in the Hull; Installing a Motor in a Canoe; Installing Power in a Yawl; Converting a "Banker" to Power Engine Installation in a Hydroplane; Putting Power in the Rowboat; Limits of Shaft Inclination; Constructing the Engine Bed; Getting the Motor Aboard; Lining Up the Propeller Shaft; The Best Exhaust; Mufflers vs. Under-Water Exhausts; Installing an Under-Water Exhaust; Primary Race Series for Ignition; Keeping the Ignition System Dry; Installing a High-Tension Magneto; From Make and Break to Jump Spark; Installing the Gasoline Tanks; Taking Care of Extra Gasoline; Spark and Throttle Controls; Constructing a Rear Starter; Propeller for Engine and Hull; Installing a Universal Joint; Gearing Motor to Propeller Shaft; The Automobile Throttle; Harnessing the Main Engine; Rebabbitting a Worn Bearing; Should Fuel Line Be Inside or Outside?

Practical Motor Operation and Maintenance

Volume 5.—One of the most valuable books of the entire set. Your motor's ills and how to cure them. This volume tells you how to adjust your carburetor, how to fit piston rings, how to remedy poor compression and a number of other things that will enable you to doctor your own motor. List of contents: Locating the Motor's Troubles; The Overheated Motor; Starting in Cold Weather; Overhauling a Marine Motor; How to Save Fuel; The Fuel Situation; Using Low Grade Fuel; How to Run on Kerosene; Supplying the Fuel to the Carburetor; Adjusting the Carburetor; Cleaning the Fuel Tanks; Cleaning the Gasoline Line; Stopping Up the Leak in the Tank; A Home-Made Gasoline Gauge; Carrying an Extra Supply of Oil; Mixing the Fuel and Lubricant; Remedying Leaky Compression; Killing the Carbon Jinx; Tool and Spare Parts to Carry; Removing and Replacing Piston Rings; Repairing a Leaky Cylinder; Grinding a Motor's Valves; Setting the Valves; Timing the Ignition System; Cleaning the Water Jacket; Making and Fitting a Gasket; Patching Up a Bearing; Straightening the Sprung Shaft; Truing a Bent Propeller; Removing the Flywheel; Separating Couplings and Pipe Fittings; Changing the Shaft Hole Location; Utilizing the Exhaust; Disposing of the Bilge Water; Heating a Small Cruiser's Cabin; Operating the Outboard Motor; The Clean and Quiet Boat; Charging a Storage Battery; When the Motor Stops Unexpectedly; Making a Unit Power Plant.

Practical Suggestions for Handling, Fitting Out and Caring for the Boat

Volume 6.—This volume is an especially valuable one. You will find in it points covering the care of your boat that you never dreamed of before. Whether you are a beginner or a finished expert this book will give you a better knowledge of the handling of your craft than you can imagine. List of Contents: Putting the Boat Into Commission; Fitting Out a Thirty-Footer; Suggestions for the Beginner; Refinishing Bright Work; Keeping the Wood Surface Bright; Putting the Boat Out of Commission; Laying Up an Unsheltered Boat; Hauling Out for the Winter; Covering the Boat for the Winter; Launching from a Wharf; Correcting Faults; Lengthening Out the Boat; Moorings and Buoys; Taking Steps to Safeguard the Anchor; What to Use in the Bilge; Preserving the Wood in Boats; Emergency Rigs for the Cruiser; Auxiliary Sails for the Cruiser; Providing an Emergency Rudder; Preparing for Southern Waters; Stopping the Troublesome Leak; Replacing a Broken Plank; Removing Broken Lag Screws; Raising the Boat's Stern; Clearing the Propeller; Protecting the Bow and Stern; Open Boat Sleeping Quarters; Ventilating the Cabin of Small Cruisers; Converting the Open Boat to a Cruiser; Making a Cover for the Open Boat; Preventing Electrolysis; Building a Club Float; A Floating Boathouse; Constructing a Landing Stage; Building the Marine; Keeping the Thief Out; A Place for Your Shore Clothes; Stowing for Life Preservers; The Winter's Alterations; What Changes Shall I Make; The Satisfactory Bilge Pump; The Pressure Water System; Making a Pelorus; Your Storm Curtains; Life-Saving Equipment; The Absent Owner's Anchor Light; Mounting the Reverse Gear.

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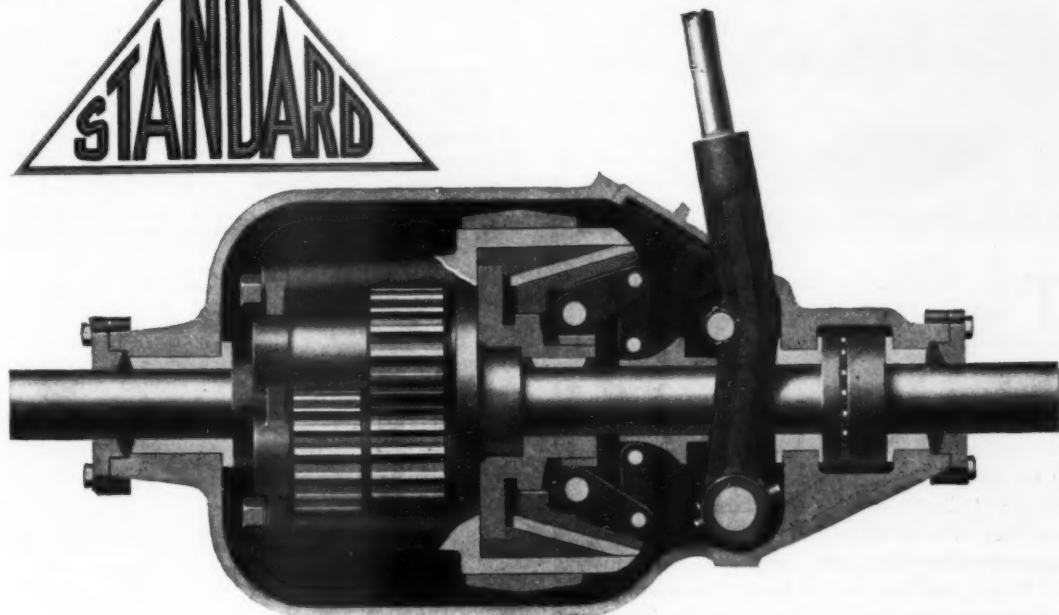
MoToR BoatinG

119 West 40th Street, New York

Advertising Index will be found on page 158



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The New STANDARD Enclosed Reverse Gear

THE STANDARD with its multi cone clutch is the most positive, yet most easily operated motor boat gear control on the market.

All of the clutch surfaces are at the point of largest diameter — the point of longest leverage which accounts for the easy shifting — just a touch will do it.

The cones cannot buckle, warp or stretch and the longer they are used the better they get — The Standard Clutch wears *in* — not *out*.

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Write for brand new 1924 catalogue and complete information — just off the press.

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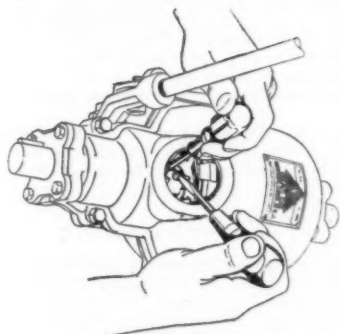


Fig. 1. This shows the easy accessibility of the clutch adjustment—it can be done with a screw driver and the opening is large enough to reach in with the hand.

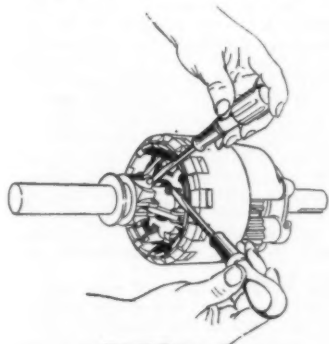


Fig. 2. To make the adjustment, merely pull out the adjusting pin and turn the toggles until the pin slips into the next notch.



21 FT. "SPORT MODEL"

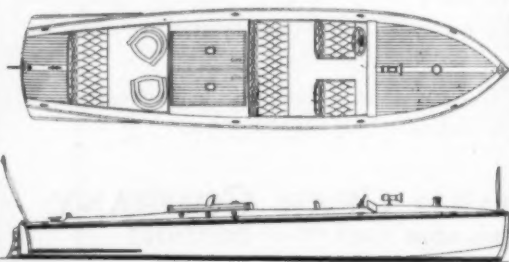
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 Benton Harbor, Mich.

Dealers: Write Us About Your Territory.



Evinrude Announces the Big Twin

(Continued from page 68)

To meet the demand for an outboard motor of greater power and speed, the Evinrude Motor Co., Milwaukee, Wis., has just placed upon the market the Evinrude Big Twin—a 2 cylinder, 4 h.p. outboard motor that drives an average boat 9 to 10 miles an hour, and lighter boats at a much greater rate of speed. Because of its greater power and larger propeller, the Big Twin is capable of hauling immense loads. The motor takes up no room in the boat—the entire hull is free for cargo. In spite of its added power, the Big Twin is really a portable motor, its weight being only 80 pounds.



Simple and rugged, the Big Twin possesses that same dependability for which Evinrude motors are famous throughout the world. Its general specifications are much like those of the Standard 2 h.p. motor. The lower gear housing parts are practically identical and the bore and stroke are the same—2½ x 2½ inches. A larger pump is supplied so as to give enough water for both cylinders. The automatic reverse is omitted in order to reduce weight. The genuine Evinrude built-in-fly-wheel magneto, easy starter and weedless propeller are standard equipment.

Due to a special twin silencer, the Big Twin is almost noiseless in operation. Special waterproof spark plugs with flexible rubber hoods to fit the spark plugs and terminals snugly, are supplied as an added protection against weather. An oil-cup such as is used on many automobiles replaces the old style grease cup on the upper shaft bearing.

For those who wish a speedy racing motor of the outboard type, the Evinrude Big Twin is the ideal equipment. It also fills a commercial need for an outboard motor of sufficient power to handle heavy loads of cargo such as sand and stone.

Economical Transportation

The Kermath Manufacturing Company is in receipt of an interesting letter from Capt. J. H. Bassett who recently undertook to deliver one of the specified cruisers, built by the Gordon Boat Building Company, from Savannah to Eustis, Florida, under its own power. The distance is over 600 miles and this was covered in five days, running twelve consecutive hours per day. Considering that this motor was new and stiff, the performance is most remarkable, since it had had only a short trial in New York before shipment. On the matter of economy it is stated that \$18.61 worth of fuel was consumed together with two gallons of oil. Further comments follow: "When we started out from Savannah, we were advised by Mr. Emerick to get a pilot from Savannah to Jacksonville, a distance of approximately 300 miles or one half of our trip. This we did, but landed on a bar 18 miles south of Savannah and four miles past the river we were looking for. After waiting for the tide to rise to get us off the bar, we proceeded to take the pilot (?) back to the Isle of Hope, and give him his carfare back home. We then again started on our way and ploughed our way for a good 70 miles until darkness set in and we anchored at a point just inside St. Catherine's Sound for the night.

With daybreak, we were under way again, crossing the Sound and putting out to the deep blue sea. Six hours later after a fine run we came in at St. Simonds Sound, about 65 miles south.

"I wish to advise you that boat behaved very well indeed, both in seaworthiness and reliability, her motor giving us no trouble whatsoever, and she bucked the Islands in the Ocklawaha River and handled as well as any boat I have ever seen. Our days were all full ones of twelve hours a day, only stops being for gas and oil and provisions, and we did the 600-odd miles in five days, or on an average of better than 10 miles per hour for the entire trip. This, inasmuch as I had to find and pick my way most of the time, I think is very good for a new boat."

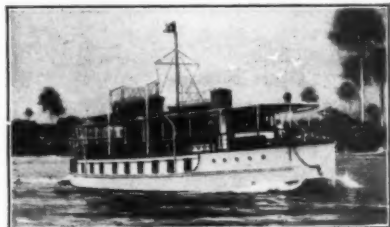
(Continued on page 124)

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ALWAYS AT A PREMIUM



65-Foot Emeska
Mr. Mahlon S. Kemmerer, New York



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Our interest in you and your houseboat does not end with the delivery of a

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It increases year after year—as we note that our boats are the center of interest every Florida season—are among the leaders wherever finest boats are found—are in such great demand for charter.

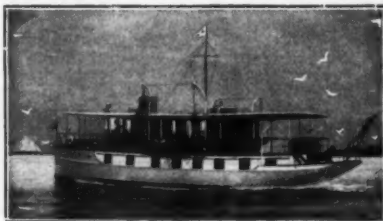
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Mr. J. Aron, New York City

HOUSE BOATS

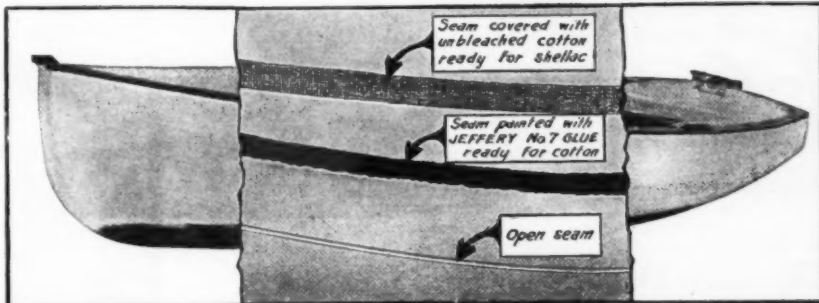


AND YACHTS

DOES YOUR BOAT LEAK? Let us tell You About

JEFFERY'S

Waterproof
MARINE GLUES



The enlarged section of the above illustration shows how the hull seams of a boat can be treated when the owner does not care to go to the expense of covering the entire hull with cotton or canvas as recommended in our booklet entitled "How to make your boat leakproof."

The lower seam is shown open, as usually is the case when a boat is laid up during the winter, the middle seam is shown painted with a coat of our Jeffery's No. 7 Marine Glue ready for the cotton fabric which is laid on the glue and ironed into it with a warm flat iron as shown on the top seam. The cotton is then given a coat of shellac and painted. When the job is completed according to these directions the patching strips can scarcely be detected.

We however believe and earnestly recommend that if a more permanent result is desired, the entire surface be covered with a fabric, laid in our Jeffery's No. 7 Black soft quality Marine Glue. This treatment will insure a boat with a coat of paint once a year being absolutely watertight indefinitely.

Send for our booklets, "How to Make Your Boat Leakproof" and "Marine Glue What to Use and How to Use It."

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BOSTON 11, MASS.

(See our ad on Page 149)

Now is the time to equip your boat with an A. E. Co. motorboat electric windlass



—A. E. CO.— MOTORBOAT ELECTRIC WINDLASS

"Step on the button—up comes the anchor"

Gypsy type for rope or cable

Weight—135 lbs.
Overall dimensions—
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Depth below deck—8½"
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Motor—1-3 H. P.
Handles anchor up to 200 lbs.

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Weight—285 lbs.
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Designed and built by
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Don't have your boating marred this summer by aggravating struggles with stubborn anchors. Equip your boat with an A. E. Co. motorboat electric windlass—it takes all the hardship out of anchor hauling. Its just as easy to operate as the self starter of an automobile. And most decidedly it is *not* expensive.

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Helpful Hints for the Boatman

How to Box the Compass, How to Mark a Lead Line, How to Pack a Stuffing Box; this is the sort of practical information contained in "Sea Craft Suggestions and Supplies." Also describes and tells the uses of the complete line of WC Dependable Marine Hardware for motor boats and other small craft. Nearly 300 pages, strongly bound in full cloth. Fifty cents (coin or stamps) puts it in your cabin for ready reference.



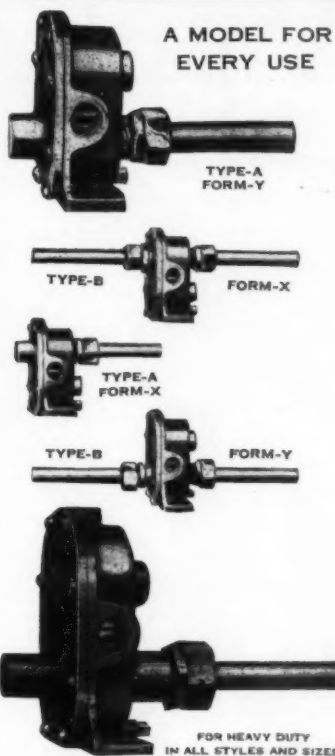
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One of the 1,001 WC Products

Accurately made, and interchangeable as to shaft size within the limits of each size of coupling. Regular Couplings suitable for most marine engines. Heavy Couplings for fishing boats and other work boats having heavy duty engines, and where great strength is desirable. Each coupling fitted with standard key way and set screws.

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OBERDORFER Bronze Pumps meet every requirement for heavy duty service. Thousands are used all over the world on motorboat engines for water and oil circulating systems. The long bearings and all-bronze construction give them a long life of dependable service.

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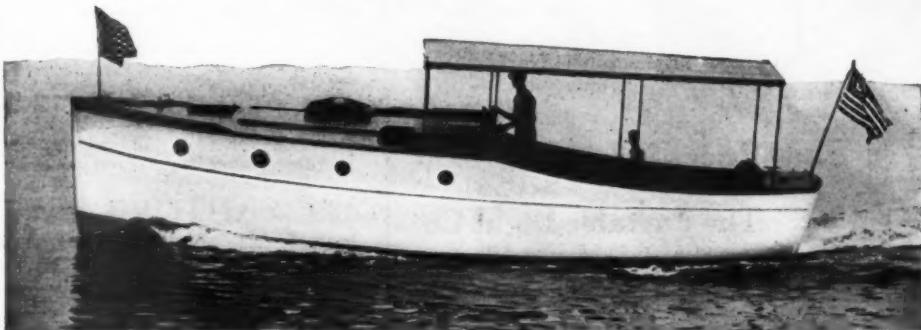
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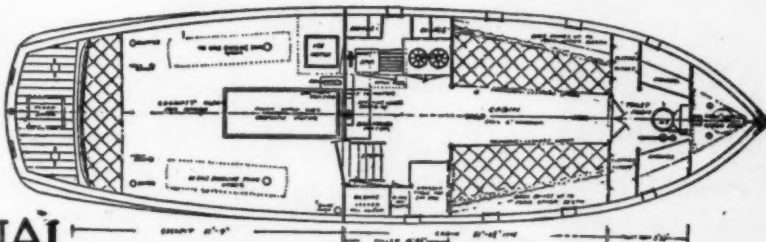
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Arrangement Plan

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Specialties are considered standard

Copper "Best" Paint Brown—Yacht
Copper Paints—Special Red and Special
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Bronze, Light Sea Green and Regatta
Green—Yacht Whites, Gloss or Flat—
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Sparon (Spar) Varnish—Engine Enamels
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pound, etc.

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Send for color cards and booklet—
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Prices \$18.00 to \$40.00

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TOPPAN OUTBOARD MOTOR BOAT A Safe and Fast Sea Skiff

With the Powerful
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Send for Details of Our
Combination Price

**TOPPAN BOAT
& ENGINE CO.**

125 Riverside Ave. Medford, Mass.

Huck Says—This is the Life

(Continued from page 32)

holds more than any man I ever see, without no visible effect. All I remembers about the dinner is the number of glasses on the table and you couldn't get them empty and one feller who musta thought he was in New York because when a waiter sticks a bottle on the table side of him, he looks around furtive-like and slips it onto the floor under the table. While some members of our party is trying to show they can hold as much as the Cubans I sits over in the corner quiet-like with Commodore Stoltz and he tells me all about the new hotel Fleetwood he is building at Miami Beach and how being a yachtsman hisself he is going to make it the yachtsmans headquarters of the world and how you can get breakfast up to two P. M. n'everything. I hires dock space from him already and Chap says if I starts early in September in my express cruiser, maybe I gets there before the season is over. Along late in the evening they is a bull fight and one of our party he is the bull and Commodore Morales, he is a swell toreador but I doesn't know how it comes out because just then some smart alex he squirts a soda siphon in my eye.

Chap he is a perfect character and don't drink nothing whatever so I goes back with him and just as we gets turned in for the night, one of our cup-defenders comes back in a heavy seaway, he hangs on my door and he says how as somebody has lifted his roll and will I find it for him. So I hunts all around his room with him hanging on my back moaning and doesn't find it and he lets out a cry o'passion, runs out into the corridor in his pajamas and says he wakes up Chap and I says try to be a gentlemen and he says I is a dirty little New England snob and I tells him to bite my foot and beats it to my room and locks myself in and he tries to smash in the door and Chap he wakes up and gets hysterics laughing and finally the half of the Cuban army turns out, they is a short battle and all is quiet. The next morning he calls me on the telephone like the last day of Pompay and says I isn't a dirty little New England snob and he finds his roll under the pillow and is locked in his room and will I come and let him out, which I done.

The races they was postponed every day because this aint no submarine party and it blows and kicks up a sea like as if it was the middle of the Bay O'Fundy and then we gives up hope that the wind will ever quit and we holds the races, which they runs under water most of ways and fifty thousand Cubans they line the Prado and bets their money and cheers the nutty Americano and nobody was drowned only one boat knocks off her proppeller on a railroad tie.

Then we has one grand goodbye blowout. They gives us a swell time at the Casino and one feller he cleans up a thousand berries on the rulett wheel and some of us we goes down and sees the Carnival which is the only time of the year they lets the beautiful senioritas loose and they rides around in automobiles and if they doesn't put your eye out with their looks, they throws confetti in your face and does it anyways. And then the next morning we packs up our hangovers and says goodbye to the finest hosts we ever has and the last I hear of Cuba is a band playing "Last Night on the Back Porch I Loves her Best of All" which proves our great American Culture is spreading all over the world.

Frank Pembroke, Huckins.

Class Racing for Sensible Boats

(Continued from page 36)

and enter the same contest on the terms proposed and accepted in the first challenge received; but no challenge shall be received later than ten days before the date set for the first race of the match.

ARTICLE VII

(a) A match shall consist of three races to be held on one, two or three days, excluding Sunday, as the local Committee shall decide.

(b) Courses shall not be less than twenty nor more than thirty statute miles.

(c) Courses shall be laid in water of not less than two fathoms, and as free from turns as practicable, but the finish must be at the starting line. Each lap or round of the course shall not be less than two statute miles. The course shall be approved by the Racing Commission who shall have power to accept or reject same.

(d) The start shall be a flying start, with a preparatory signal to be given five minutes before the starting time. The finish of each race shall be thirty minutes after the first boat crosses the finish line. No boat will be allowed to start later than five minutes after the starting signal in any heat.

(Continued on page 90)

TANKS

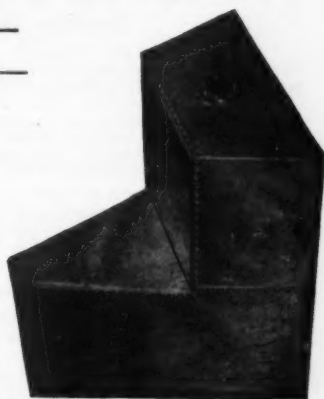


Special
Stern Tanks

Any Special Size or Shape

In Any Material —
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Special
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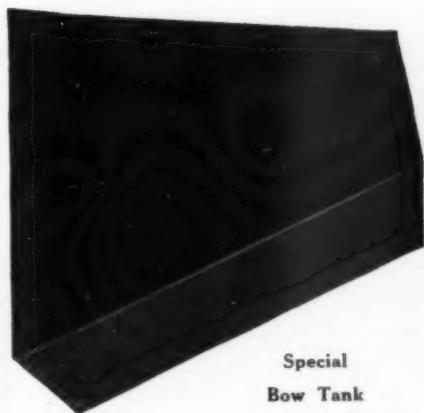
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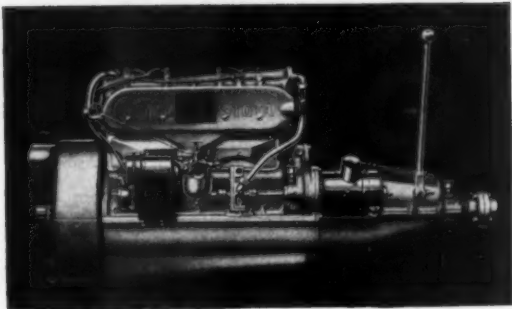
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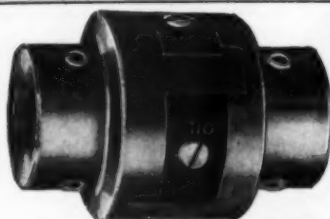
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Class Racing for Sensible Boats

(Continued from page 88)

(e) The winner of the match shall be determined by the point system as provided for scoring in the Gold Cup Race, the winner being the boat which has scored the highest aggregate number of points in all heats.

(f) Each club whose challenge has been accepted shall name its representative boat, and shall file with the challenged club and the Racing Commission of the Association, at least ten days before the date set for the first race, a certificate of the measure of such club of the measurements of such boat.

(g) A boat to be eligible to compete shall be the bona fide property of one or more amateur members in good standing of the club it represents.

(h) Measurement of boats must be verified prior to the match by the Measurer or the Assistant Measurer of the Association who is acting on the Race Committee in accordance with Article IV.

(i) The hulls of competing boats must have no breaks in the longitudinal continuity of the immersed surface, not more than one lifting surface and must conform to the committee's idea of what is generally classed as a displacement type. The keel and chine (or bilge) must be continuous and must extend from the bow to the stern (or stern post). Steps, either transverse or longitudinal, will not be permitted. Surfaces on each side of the keel line between the keel and the chine (or bilge) must be continuous and not contain breaks, jogs or notches of any description. There shall be no movable plates, hinged devices, adjustable steps or planes on the bottom of the boat and no catamaran type of construction. The chines must not project below the horizontal level where the planking joins the keel at any point in the same cross section of the hull. Only three bilge bairers will be permitted, not more than two of which shall be in any one watertight compartment, and each of them must be limited to not more than four square inches opening inside the orifice and not be over five inches, in any outside dimension. The decks must be strong enough to safely carry the weight of two men and thick enough to hold all fixtures and fittings securely. The entire construction must be strong, durable, seaworthy and safely manageable. Boats must carry the full equipment required by the steamboat inspection laws. Clinker-built hulls are acceptable, provided the laps of the planking do not project more than one inch, where one edge of a plank overlaps another. A boat must finish with the full equipment required by these rules, that she started with, except fuel and oil. Should any of it fall overboard, same must be retrieved or replaced as quickly as possible or otherwise the boat will be subject to disqualification.

Note—Sea Sled model acceptable.

(j) The total maximum piston displacement of the motor in boats competing for this Trophy shall not be more than 335 cubic inches.

(k) Boats competing for this Trophy shall not have a waterline length of less than 21 feet.

(l) Boats competing for this Trophy shall not have a waterline beam at their widest section of less than 5 feet. Minimum freeboard must not be less than one inch for each foot of L. W. L. length. Freeboard amidship must not be less than three-quarter of an inch for each foot of L. W. L. length and at stern not less than one-half inch for each foot of L. W. L. length.

The above measurements are from L. W. L. at rest to top side of deck or covering board where it joins side.

Scantling restrictions: Planking sides, minimum 3/8 inch

Planking bottom, minimum 9/16 inch

Planking deck, minimum 1/4 inch

(m) This Trophy shall be awarded for one year to the club to whom the owner of the winning boat belongs, or is a member of.

(n) There shall be no limit to the number of challenges from any club.

(o) Competing boats must exhaust at the stern or under water when underway.

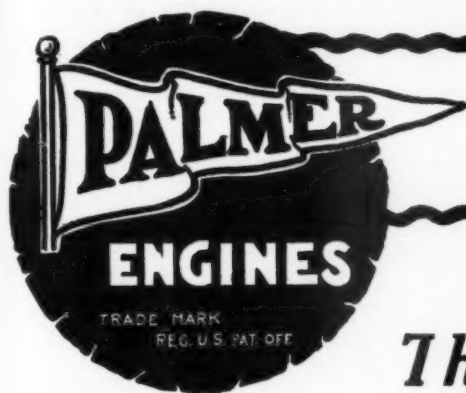
(p) Competing boats shall be fitted with at least two transverse bulkheads, one of which to be within three feet forward of engine and to be watertight. The bulkheads are to be at least 3/8 of an inch thick.

(q) No postponements from the advertised time of start of the race shall be allowed for any cause.

(r) Competing boats shall be equipped with an efficient reverse gear.

(s) An entry fee of \$25 shall be charged which must accompany entry, same to be returned to the owner if the boat starts in one or more heats.

(Continued on page 92)



Get a Palmer

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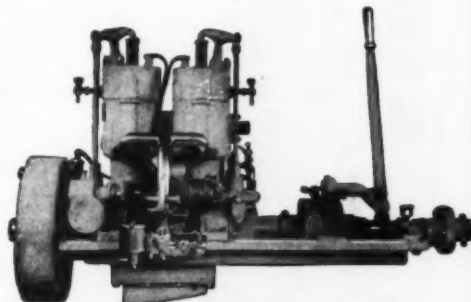
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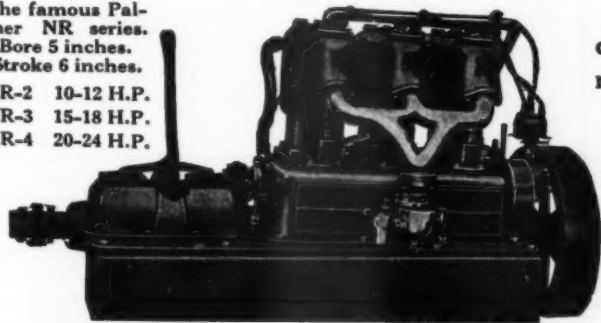
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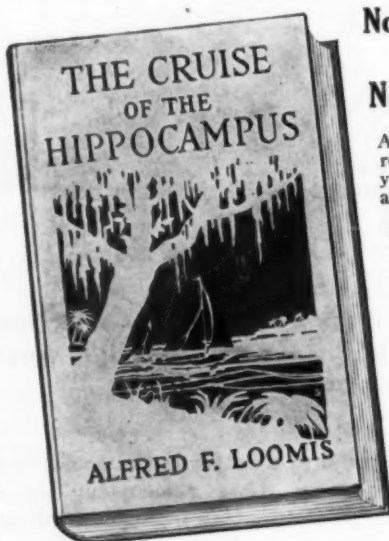
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Class Racing for Sensible Boats

(Continued from page 90)

(t) Competing boats must carry full equipment in the race, including floor boards, seating equipment for four persons, etc., and all seats must be well upholstered.

(u) A competing boat shall not be equipped with a gear box.

(v) The form of power plant shall be one stock marine motor. The owner shall file an affidavit sworn to by the engine manufacturer, stating that the motor is a regular stock marine motor and not *special* in any particular.*

*A marine motor is one defined as "An internal combustion motor originally manufactured, assembled, advertised and offered for sale as a marine motor." (Rebuilt automobile and aviation engines not permitted to compete.)

NOTE: The Council unanimously instructed the Racing Commission that the action taken at the annual meeting of the American Power Boat Association in prohibiting gear boxes must be interpreted to mean not only gear boxes with a step up gear ratio, but gear boxes with a one to one ratio, and any form of device to increase or decrease propeller speed above or below engine speed.

It was further ruled that the propeller shaft must be in line or nearly in line with the crank shaft and rotate at exactly the same speed, and that the function of any reverse gear or clutch used shall not be different from the ordinary use of a reverse gear, that is, to reverse the direction of the rotation of the propeller or for the purpose of idling. In other words, no device for stepping-up propeller speed shall be included in the reverse gear or any form of gear box.

ARTICLE VIII

The Race Committee shall by mutual consent and agreement fix and decide all the terms and conditions of the match (not inconsistent with the terms and conditions of this instrument), whether relating to dates, course, notices, or any other matter whatsoever pertaining to the match or preliminary thereto, except that the Challenged Club must immediately, upon receipt and acceptance of the first challenge, notify in writing the Racing Commission of the American Power Boat Association of the fact, and transmit to it a copy of such challenge; and the date for the first race of such match shall not be set for a day earlier than thirty days after the course, dates, and other matters have been agreed upon and written notice of the same sent to the Racing Commission of the American Power Boat Association.

The Challenging and Challenged Clubs, may, by mutual agreement, waive such provisions of this instrument as would otherwise govern the match or preliminaries thereof; provided, however, that the written consent of the Racing Commission of the American Power Boat Association shall have been first obtained.

ARTICLE IX

If deemed desirable, the terms of this agreement may be modified by the American Power Boat Association while the cup is in its possession, and when not in its possession by agreement between the American Power Boat Association and the Club having custody of the cup; provided, however, that no modification shall be made during the pendency of any challenge unless consented to in writing by all the challengers.

ARTICLE X

In case the Club having the custody of the cup shall be dissolved, or shall cease to exist, or shall resign from the American Power Boat Association, or shall refuse to or fail to comply with all the terms and conditions hereof, the said cup shall thereupon revert to the American Power Boat Association, and shall continue subject to the terms and conditions of this instrument.

ARTICLE XI

This instrument shall be executed in duplicate originals, one of which shall be preserved with the archives of the American Power Boat Association and the other shall accompany and be delivered with the cup whenever won and transferred.

The cup shall be delivered to the Chairman of the Racing Commission one week prior to the date set for the first race of any match for the said cup, and a receipt given by the Chairman of the Racing Commission to the club thus delivering the cup.

After the finish of a match for the cup the Chairman of the Racing Commission of the American Power Boat Association shall have the cup suitably engraved with the name of the Club and the boat winning same with date, and shall deliver said cup to the proper official in the Club winning same, taking a receipt from the Club receiving the cup.

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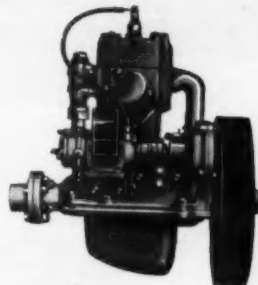
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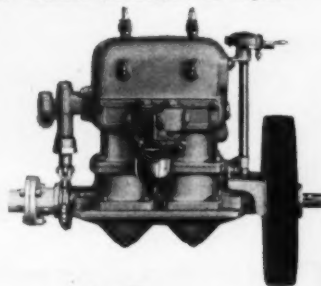
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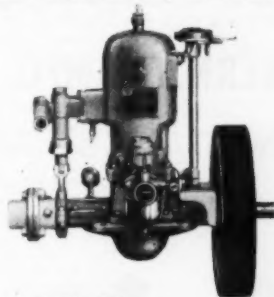
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Everett Hunter, Sr. says, "We have installed Kermath motors ever since they were built. Every one we have sold is giving splendid satisfaction and we have not received one complaint nor have we ever found any defects of workmanship or materials."

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The "Sea Nymph" shown below has a Kermath 50 which Mr. Marshall says gave him far better speed than he expected. He can guar-

antee a speed of 25 miles an hour for an unlimited time; over a measured course she did 29-1/2 miles per hour, also made a run of 25 miles in one hour carrying fifty gallons of gas and five passengers.

The following letter from the owners of Sea Nymph gives further interesting facts about the boat:—

THORN-REED LUMBER COMPANY

Apalachicola, Fla., Jan. 21, 1924.

Marshall Boat Works,
Apalachicola, Fla.

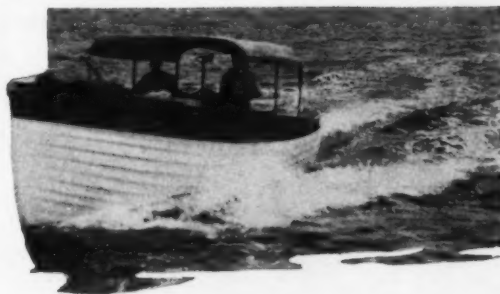
Dear Sirs: Attention: Mr. Rudolph Marshall
It is with pleasure we write you expressing our appreciation of our runabout "Sea Nymph" which we bought from you last July for our logging operations. We have used this boat in this service for these many months and the sturdy construction of your boats has saved us not only time but money in its operation. Our highest praise could not fully do justice to the wonderful power plant, a "Kermath 50," which has given us six months of constant efficient service. It is almost unnecessary for us to state that this boat is giving us complete satisfaction and that we would be only too glad to recommend it to any of our friends.

Very truly yours,
THORN REED LUMBER CO.,
(Signed) by J. P. THORN, Gen. Mgr.



Capt. J. K. Du Pont's Sea Skiff "ALBULA," shown at the right, is a 28' x 8' 6" x 2' cruiser designed especially for fishing use and built by Walter A. Kieswetter Boat Works, Miami, Fla. This boat does 15-½ miles per hour easily with her Kermath 50.

Mr. Kieswetter has specialized in various sizes and types of Florida fishing boats, from a 16 ft. canoe up, and is a large user of Kermath engines.



The Sun Flower Boat Works is conducted by Mr. F. A. Woodsicka at Tomahawk Lake, Wisconsin. Here is one of their 20 ft. V-bottom runabouts which is a very popular model in this locality. The power is a Kermath Vanadium 20 which drives the boat 20 miles per hour. Such speed with a 20 H.P. engine is evidence of the excellent lines of the hull and the excellent power of the Kermath engine.

KERMATH ENGINES



At the right is the cruiser Roberta II owned by Mr. Herbert Wilson, Milwaukee, Wis. The engine is a Kermath 20-25 and Mr. Wilson writes that the engine has given him perfect service, including one eight hundred mile cruise last summer.

Such statements are characteristic of Kermath owners. They are universally satisfied with their engines and with the steady service they receive. All over the world you will find Kermath powered boats that are giving the kind of service and satisfaction that encourages you to buy a boat and enjoy the greatest sport on earth.

Here is another popular Florida fishing boat, a 32' x 9' x 26" cruiser built by the Mathews Boat Works, Daytona, Fla. It is powered with a Kermath 35 which gives a speed of 12 miles an hour. The arrangement and construction of this boat are unique in many features which makes it especially suitable and comfortable for fishing. It is solidly built and beautifully finished, such a boat as anyone would be proud to own.



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Illustrated below, is built so that it neutralizes all vibration from the motor, and is so perfectly balanced that it rides on an even keel, does not bury at the stern or ride out of the water at the bow. Reinforced construction, and the built-in transom prevents motor from working loose.

MULLINS BODY CORPORATION
 Boat Dept., 820 Depot St., Salem, Ohio



Havana's First International Races.

(Continued from page 21)

a few hours before. Yet, considering what we are accustomed to in the North, the setting was perfect and if the weather as we found it was so much poorer than their real boating weather as they told us it was, we were not sufficiently acclimated to appreciate the difference.

Of course the first point of interest we were shown was the Habana Yacht Club. If what we saw here was to be all and we were to go no further, our trip to Cuba would have been a decided success. We had seen the Habana Yacht Club once before—during the winter of 1922 when we went over aboard Gar Jr with Commodore Gar Wood in the express cruiser race from Miami to Havana. But that time we were so glad to see land after about the hardest nine hours at sea that anyone ever went through, that everything on land looked good to us no matter whether it was a more or less obsolete building of a yacht club which had done service for scores and scores of years. We were told at that time that the next time we visited Havana we would be greeted by a new Club house but we never even imagined that it would be so grand and pretentious.

This organization, founded in 1886 has outgrown two club houses either of which would be a credit to many American Yacht Clubs and as a third, they have put up a building costing a full million dollars. And what is of far greater moment they have done all of this out of the profits of the Club without requiring a bond issue or incurring any kind of a mortgage or other indebtedness. Words would fail to properly describe the magnificence of it all. In architecture, arrangement and completeness it is not surpassed by any yacht club in the world. Every form of recreation is provided for and it is hard to imagine a comfort which any member could wish for which has not been anticipated in advance.

The boating activities at the new Habana Yacht Club will not be confined to motor craft alone but will include sailing, rowing, canoeing, swimming and all allied sports. A number of eight-oared crews are forming and the fact that they will practice and race in their shells on the open ocean during the summer months is an indication of the boating possibilities around Cuba.

The races this winter were held on the open ocean. The old Atlantic never was kindly disposed toward having its surface rent asunder by mile-a-minute craft especially of the runabout variety. She made no exception this time and for three days nothing smaller than transatlantic liners could live on those waters set aside for motor boat races. The third day it was still rough, very rough, but not quite as bad. Instead of five and six foot seas which broke completely over the sea wall and sprayed even the far side of the main street which runs along the water front, the wind shifted a little, forming a slight lee and the waves fell off a foot or two in height, which made going better, but still decidedly bumpy for speeders. Yet it was race then or never since the Americans were due back. So the Cubans gamely consented to race in spite of the unfavorable conditions.

The first race was for the 625 cubic inch runabout class. Two Cuban entries, Mambisa and Bibi were matched against the American boat Wilgold, owned by J. A. Williams of Buffalo which had just previously defeated the field in the Miami regatta and won the right to race for the International Championship of this class in Cuba. Wilgold is a new boat designed and built by Hacker and powered with a 6-cylinder Gold Cup model Packard marine engine.

At the starting signal with Jack Williams at the helm, Wilgold went over the line almost with the gun but Bibi and Mambisa both stalled before crossing the line. Jack Williams, good sportsman that he is, refused to continue with his competitors in trouble, turned his boat about, returned, and signalled to the Committee for a new start. On the second attempt, the same trouble developed and Wilgold again returned. On the third attempt, Bibi and Wilgold went over the line together, but Mambisa again stalled her motor but only for a few seconds and then a real race began. Wilgold soon took the lead over Bibi but was not to hold it for long over Mambisa which as soon as she got running properly, set up a chase which brought the thousands of spectators to their feet.

The course was a straightaway mile with single turning buoys at each end—two miles around. The sea was terrible. Wilgold was completely under water and out of sight most of the time. Mambisa being designed for just such waters, was the better sea boat and was making much better weather of it than the Buffalo craft. She went around the single-buoy turns wide open.

Foot by foot she gained on Wilgold. It appeared time and time again that both craft must surely upset, so far out of water did they leap but each time they righted themselves. Wilgold was evidently filling with water as she appeared to be settling

(Continued on page 98)

BRENNAN

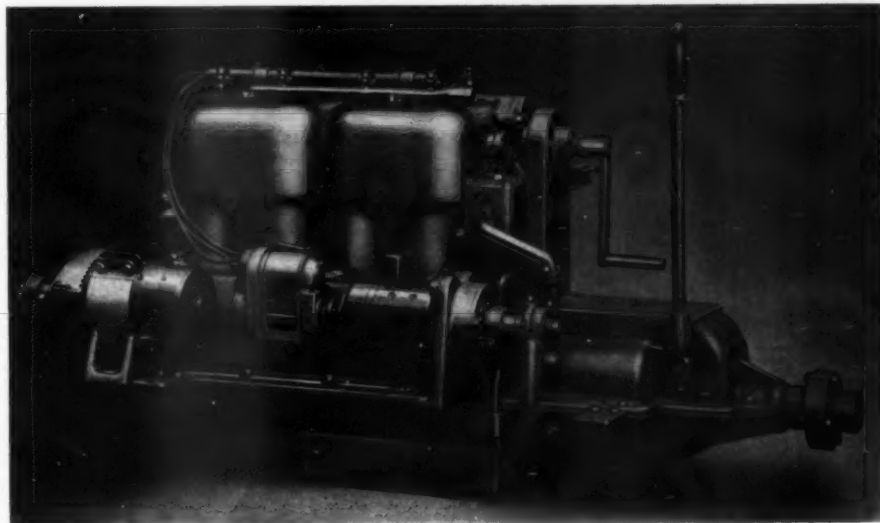
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CRANK CASE—Equipped with four hand hole plates, two on a side making motor very accessible.

CRANK SHAFT BEARINGS—2 1/4" diameter.

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CARBURETOR—Schebler.

PROPELLER WHEEL—Hyde or Columbus.

COUPLING—Flange.

OPERATION—Motor operates at any reasonable angle.

Stuffing box, control levers, spark plugs, wiring, in fact everything required for a complete installation.



31' x 8' V bottom cruiser owned by F. S. Clarke, Oakland, Calif., powered with a Brennan D-4 25-35 H.P. motor, speed 15 M.P.H.

1129 Clay St.,
Oakland, Calif.

Brennan Mfg. Co.
Syracuse, N. Y.

Gentlemen:

With reference to the model D-4, 25-35 motor installed in our 31' x 8' raised sport cruiser.

We desire to say that the motor is entirely satisfactory giving us as much as 15 m.p.h. with no vibration. We anticipate making many pleasant trips about here this winter as there is no closed season for boats here.

Yours very truly,

CLARKE BROTHERS

(Signed) F. S. Clarke

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IN the Gentlemen's Runabout class, Belle Isle Boats and Hacker-Craft have won for themselves unique standing among seasoned yachtsmen. They recognize in Belle Isle Bearcats and Hacker's Dolphins the standardization of the many excellencies which have made Belle Isle-built and Hacker-built custom boats leaders in their fields. The Belle-Isle-Hacker standard line now includes:

The Dolphin—A 23 ft., double cockpit, six passenger, 24 mile per hour runabout, with Scripps Motor, priced at. \$3,050.00

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Same model equipped with Peerless Motor, delivering 33 miles per hour, priced at \$4,600.00

The Belle Isle Bearcat—A 26 ft., double cockpit, eight-passenger runabout equipped with 4 cyl., 125 H.P. Hall-Scott marine motor, and with a speed of 35 miles per hour, priced at..... \$7,770.00

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All prices include tax and are F. O. B. Detroit

Palm Beach—Miami Race Results

Belle Isle Bearcats, standard models, took first and second in the Gentlemen's Runabout class at the Palm Beach races. They also took second and third at Miami in the same class. First at Miami went to a Hacker-Craft, a specially designed Gold Cup model runabout.

Write for complete information on Belle Isle-Hacker Boats. We handle also boats of all kinds from canoes to cruisers, and all types of marine motors, including outboards. Put your boating requirements up to us.

Belle Isle-Hacker Boat Sales Co.

"Complete Boating Service"

6304 E. Jefferson Ave., Detroit, Michigan

Havana's First International Races

(Continued from page 96)

but her driver did not dare to slow up as the only thing which was keeping him afloat were his bailers which would stop working the moment his boat speed fell off. The waters were full of sharks, too.

At about the tenth mile Mambisa drew up alongside Wilgold. On shore the cheering sounded like a home run at a major league ball game with three men on bases. Their boat was defeating America's best. At the upper buoy, Mambisa made a hairpin turn and further increased her lead. Thousands of dollars changed hands on shore, thousands of new bets were made. Wasn't it worth all it had cost to stage the regatta?

At the twelfth mile, Mambisa still led by a few seconds with Bibi far astern. Jack Williams at this moment must have realized that his boat, representing America, must win no matter if it was to be the last race his boat ever sailed. No one among the thousands who were watching the races believed that Wilgold would weather the seas that were running if another pound of power was added, but Jack took the chance and gave his ship another notch on the throttle. What little of his boat had remained in the water up to this time now came out. Wilgold only touched lightly upon the crests of the waves and broke them into mountains of spray. Her seagoing qualities seemed to improve wonderfully and inch by inch she began to gain on Mambisa. It was now the last lap. At the lower turn where the water was the roughest, Wilgold took it wide open. For seconds she was completely lost from view, out of sight of everybody. "She's overturned" was the cry from all on shore, in unison. But no, she weathered the big comber and came into the home stretch leading Mambisa by a scant length. When the smoother water near the finish line was approached, the gap was widened a little but the finish was so close and the crowd was so thrilled that they cheered for many minutes after the boats had gone to their moorings.

What has been written above about the runabout class is almost equally true in reference to the race which followed—the Sweepstakes Class in which Howard Lyon's Baby Cub, driven by the owner, won from Colonel E. H. R. Green's Mary with the writer at the wheel by less than one-fifth of a second in the first twenty-mile heat. In this race, the boats of the runabout class were supposed to start also but the rough going which they encountered in the first race was enough racing for one life-time, so only the two Baby Gars, Mary and Baby Cub were at the starting line when the signal to go was given. Rough water interfered with a real demonstration of the speed possibilities of these two boats but both being of the same design and power, made a fine race of it from the spectators' standpoint.

During the entire first twenty-mile heat of the Sweepstakes race, Baby Cub and Mary ran almost neck and neck race. At the end of one lap Baby Cub would be in the lead, the next time the boats came around Mary would have the pole. While the speed the boats were making was relatively slow, due to rough waters, yet the competition was so close that the actual miles per hour mattered little to the enormous crowds on shore who were thrilled every minute, and let their enthusiasm be known by cheer upon cheer.

As the two boats in the Sweepstakes class approached the finish line on the last lap both were wide open and showing a speed not far under a mile a minute clip. It was by far the fastest speed ever seen in Cuban waters. Baby Cub was leading by a scant two lengths a quarter mile from the finish. Her owner, Howard Lyon, who was driving his first motor boat race, was getting every possible bit of speed out of his ship. If he could hold the speed he was now making, his boat was a sure winner. But Mary was not yet beaten. She was coming along even faster than Baby Cub. Inch by inch she was gaining. One hundred yards from the finish our bow was even with the helmsman in Baby Cub. Fifty yards more we had gained another five feet. Never did time go so swiftly as it did in that mile run up the home stretch. We turned our boat slightly in shore to beat out a big comber that was approaching on my port bow. The wave which we were avoiding hit Baby Cub and she appeared momentarily to stop. When the spray and foam which she went through cleared, the two boats appeared to be bow and bow. There was less than a length to go to reach the finish line. In one more second it would be all over. Bang went the Committee's gun. Nearly another mile was required to stop our boats and bring them about. We headed for the judges stand to find out which boat had won for we were so close that from our positions in the boats it was impossible to tell. The crowd on shore was about equally divided as to the winner. It was divided about 50-50. Many signalled to us that Baby Cub had won and about an equal number thought Mary was the winner. But the judges awarded the heat to Baby

(Continued on page 144)

The FIRST

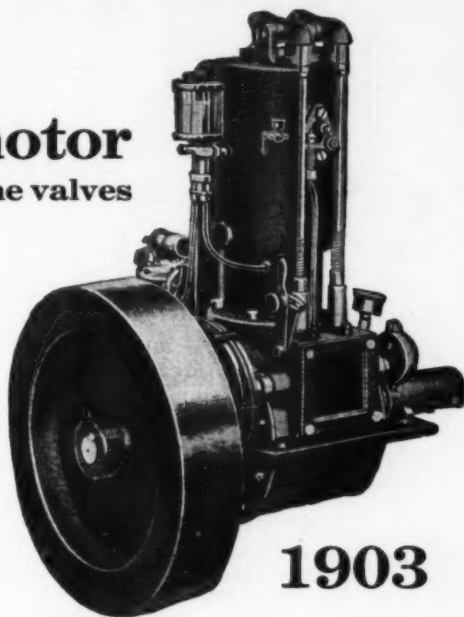
valve-in-head motor

employing removable cages for the valves

DESIGNED and brought out in 1903 by Mr. Russell A. Frisbie at Middletown, Connecticut, this first valve-in-head motor, in point of power, reliability and economy, immediately established the Frisbie in the forefront of marine engines.

While in its initial stage it was equipped with low tension ignition, gravity oil feed, stub tooth timing gears, and low carbon crank shaft, it HAD OVER-HEAD VALVES. That this principle is most favored today is evidenced by the many engines of this type now offered to the public.

It is quite evident to any prospective buyer of a marine engine that the experience of a pioneer in valve-in-head construction, augmented by over twenty years of production, improvement and refinement is of real tangible value.



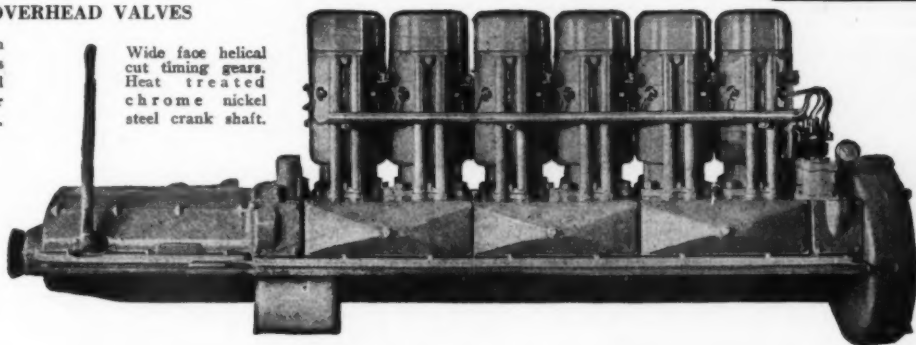
1903

1924 - The Frisbie Six

DUAL OVERHEAD VALVES

Double high tension ignition. Two plugs per cylinder. Full pressure feed water cooled oiling system.

Wide face helical cut timing gears. Heat treated chrome nickel steel crank shaft.



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The natural growth of The Frisbie Motor Company has recently made reorganization advisable. New plans adequately provide for a large volume of manufacturing output that immediate shipments from stock may be made.

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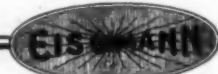
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G4

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Absolutely dependable under all conditions.

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ATLANTIC SUPPLY CO.

ATLANTIC HIGHLANDS, N. J.

New Packard Engines

That the Packard Motor Car Company looms as a probable big factor in the motor boat engine building industry is indicated by an announcement of the company just made that it has gone into production on two new types of marine motors. This gives the company a complete line of five marine power plants, covering a broad field from the eighteen-foot fishing boat to the express cruiser.

The first of the two new engines is a straight eight. This motor, while it incorporates certain features which have been carefully proven in automobile practice at the expenditure of hundreds of thousands of dollars is primarily designed for marine purposes and is a strictly marine power plant.

The other is a six-cylinder marine engine in which is incorporated the design features which have been so thoroughly tested in the six motors installed in the U. S. Navy's great airship, the U. S. S. Shenandoah, formerly the ZR 1.

Both motors are furnished in either right or left rotation for twin installation and are equipped for salt water service. Both are said to be particularly suited for express cruisers.

The straight eight has a bore of $3\frac{3}{4}$ inches and stroke of 5 inches. It is rated at 60 to 75 h.p. at 1800 r. p. m. and up and is asserted to be the only eight cylinder-in-line motor which is in perfect balance. Unbalanced forces have been completely cancelled through the use of a new type of crank shaft, the principal feature of which lies in the fact that the two-crank pin thrown at each end are placed at a 90-degree angle from the center four throws, permitting of a firing order that brings the reciprocating forces into complete balance.

Another new feature in the crankshaft which gives further smoothness in operation lies in the fact that nine main bearings are provided, reducing the unsupported sections of the shaft to the minimum. The accessibility of this motor, Packard engineers assert, together with its freedom from vibration will make it an ideal marine power plant.

The new six-cylinder engine is of much larger size having a bore of $6\frac{5}{8}$ inches and stroke of 7 inches. It develops 275 horse-power with proper compression ratio for marine service and with low motor speed.

Accessibility is one of the big features claimed for this motor also. As indicative of the success which crowned the efforts of the Packard engineers in their striving for simplicity and accessibility it is pointed out that all adjustments necessary on the U. S. S. Shenandoah can be made while the ship is traveling through the air and that it is possible to change a cylinder or remove a connecting rod or bearing in two hours on any one of the motors while the great ship is under way in the clouds.

The other marine motors on which the Packard has standardized and on which the company now is in production are the Gold Cup and Sweepstakes models and the Packard Six.

The Gold Cup model is a six-cylinder power plant of 618 cubic inches piston displacement. It was this motor that was used in the Packard Chriscraft with which Col. J. G. Vincent, vice president of engineering of the Packard Company won the Gold Cup race in 1922 and again in 1923. The same engine is used in Harry B. Greening's Rainbow III, declared the most perfect gentleman's runabout that has been produced under the Gold Cup rules. On the Muskoka Lakes last fall Greening drove the Rainbow III in a 24-hour run which broke all records for any kind of a boat with 1064 miles.

Repairs on the Packard Gold Cup model motor in Mr. Greening's boat from the time it was installed in the hull until the craft was laid up for the winter after the historic 24-hour run, although the little craft had been run daily all summer and had piled up thousands of miles, consisted entirely of the changing of one spark plug, the replacement of an exhaust manifold gasket and the slight filing of a push rod to compensate for the slight elongation of one valve. "She has never missed an explosion all season" is Mr. Greening's comment on the motor.

The Sweepstakes model is a 12-cylinder power plant or 1237 cubic inches piston displacement, which although considerable under the engines in other boats in piston displacement finished second and third in the big sweepstakes race at Detroit last summer as the installation on the Packard Chriscrafts II and III.

The Packard Six formerly was known as the Junior model. It has the same bore and stroke as the new Straight-Eight and it too is asserted to be extremely smooth and flexible. In this motor a seven-bearing crankshaft is used. It has been successfully tried out in a large number of boats of many types and sizes in various parts of the country during the last two years and has been adopted as the power plant for the standardized boats now being produced by the Great Lakes Shipbuilding Corporation.

All five of the Packard marine motors are produced in the company's engineering laboratories by the same workmen and of the same materials that have built up the reputation Packard has for dependability and quality.

*this
year
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Don't Fail to Read
the SPECIAL TRIAL OFFER
on the following pages—
the best offer ever
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SPARK PLUGS

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The Altitude Record for Spark Plug Quality



RAJAH SPARK PLUGS



WE want you to try RAJAH Spark Plugs. We know they will give you longer service, more satisfaction and less trouble than any plug you ever used.

We are so sure of this we are willing to sacrifice our profit on your trial order, because we know you will continue to be a Rajah user, year after year. So we are making here the most liberal trial offer we ever proposed. This is the Special Offer:

We will give you an extra Rajah Porcelain free with each two Rajah Spark Plugs, any size or type. Your order must be written on the special order coupon printed on the second following page.

Get a full set of Rajah Plugs for your motor—we will send one extra porcelain free with each two plugs ordered. Mail the coupon to us or hand it to the nearest Rajah dealer who will fill your order and send the signed coupon to us.

Rajah Spark Plugs have been favorites with boat owners for more than twenty years. Of course they are largely used on automobiles, trucks, tractors, airplanes and motorcycles too. But we are particularly proud of their well-known boating popularity because it takes an exceptionally good plug to stand up in hard marine service.

A marine engine runs under full load all the time. The heavy fuel charges quickly short-circuit a poorly

designed or poorly built plug. Skipping explosions waste fuel and cut down the power, all because ordinary plugs aren't built to stand such a strain.

But Rajah Plugs were designed in the days before tremendous price competition had cut into the quality of most motor accessories. And we have always maintained their high standard of construction, using the best imported porcelains, the best materials and workmanship money can buy.

A RAJAH Spark Plug Lasts Forever

The Rajah Plug is built to last indefinitely. Boatmen have told us about using the same plugs for seven to ten years. The only part that can deteriorate in service or be broken by accident—the porcelain—can be replaced in a minute's time.



Extra Rajah Porcelain 50c. each

Renewing the porcelain makes the plug as good as new. Simply unscrew the bushing, insert a new porcelain and tighten it up. The old porcelain can be cleaned up at your leisure and kept for future replacement unless it has become cracked or otherwise damaged by careless hand-

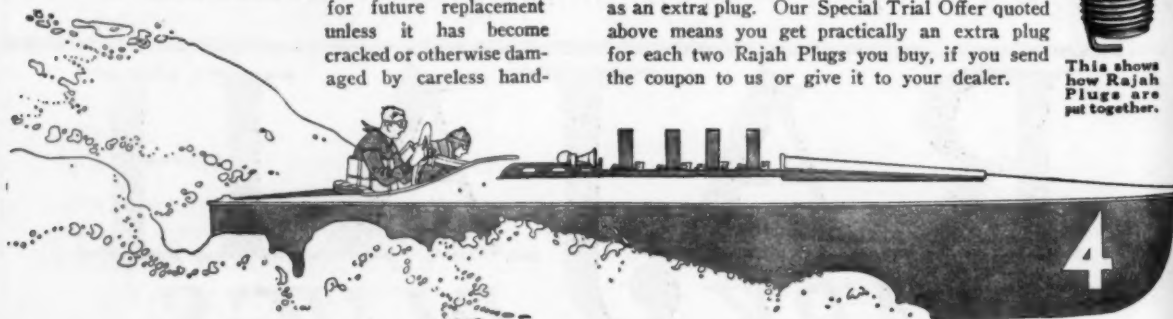
ling. You can always get new porcelains from us so you never have to throw a Rajah Plug away.

This Rajah construction is an important feature for a boatman's plug. No one wants to throw away a plug that is good for years more of service after it is cleaned. And you can't properly clean any plug that you can't take apart and get at every part of the porcelain.

An extra Rajah Porcelain is therefore as good as an extra plug. Our Special Trial Offer quoted above means you get practically an extra plug for each two Rajah Plugs you buy, if you send the coupon to us or give it to your dealer.



This shows how Rajah Plugs are put together.



For Open Boats and Outboard Motors

Waterproof Type

RAJAH

SPARK PLUGS

IF you have an open boat or an outboard motor, you will want to use the Waterproof Type RAJAH. It is Waterproof, Shockproof and Breakproof—the only successful waterproof plug ever designed.

It is a serious thing when a spark plug goes bad in a small boat, especially with a single cylinder or twin cylinder motor. But if you use this waterproof plug, you never fear rain or spray.

You can drench the motor with a shower of solid water without affecting the regularity of the spark. You can work around the engine while it is running without the chance of getting a shock.

Money cannot build or buy a more reliable or trouble proof spark plug.

The Rajah is one of the oldest spark plugs on the market. It has survived all competition—from cheap plugs, from high priced plugs, from fancy designed plugs. It is purchased for factory equipment only by manufacturers who are particular about the service of their engines, because we do not attempt to compete in price with cheaply made plugs. Still Rajah plugs have been regular equipment on several high-grade engines for many years.

Rajah engineers are ignition specialists. They have worked with famous motor boat and automobile racing

Manufactured by RAJAH AUTO SUPPLY COMPANY, Bloomfield, New Jersey, U. S. A.



↑ Flexible Rubber Nipple over the terminal connection

← Sturdy Condensite Protector over the porcelain

← Standard Rajah Plug construction underneath

The Waterproof RAJAH is standard factory equipment on several well-known makes of marine engines and outboard motors.

Here are the proper sizes for popular outboard motors:

Caille: 7/8-18	Johnson: Metric
Elto: Special Metric	Koban: 7/8-18
Evinrude: 7/8-18	Lockwood-Ash: 7/8-18
	Spinaaway: Metric

drivers, with aviators and automotive designing engineers, to eliminate spark plug troubles as much as possible. As a result Rajah plugs are used exclusively by many experienced motor users who have found that Rajah reliability is the best spark plug insurance.

Rajah Plugs are made in all types and threads so there is a proper type for every engine. See the different types on the following page. If your dealer doesn't carry in stock the particular type you want, write us, stating the name and model of your engine.

Pick Out Your Favorite Type of RAJAH SPARK PLUG



1/2" Standard
\$1.00 each



1/2" Long
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Standard
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Waterproof,
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1/2" only
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7/16-18 Giant
Also 1/2" \$1.25 each



Sectional view of
RAJAH Solderless
Terminal. Quickly
attached to cable
without solder or
tools.

**Send the Coupon below and receive an Extra Rajah Porcelain
FREE with each two spark plugs you order.**

Rajah Terminals Save Time and Trouble. They Fit Any Plug.

It is not necessary to have any special terminal to use Rajah Spark Plugs as we furnish a Thumb Nut Terminal Clip free with each plug. However, you

can save yourself a great deal of future time and trouble with loose connections by equipping your spark plug wires with Rajah Terminals.



Thumb Nut—with all
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Regular
Fits any
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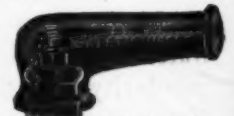
Thrust
Furnished with ferrules
to fit any size cable
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Hook



Primary
Ferrules to fit
cables up to 1/4"
7c each



Keeps connections dry.
Protects against shocks
15c each

Use This Special Trial Order Coupon

Rajah Auto Supply Co., Bloomfield, New Jersey.

Gentlemen:—

Please send me postpaid the following Rajah Spark Plugs, and one extra Rajah Porcelain free, for each two plugs ordered below:

Number	Thread	
Standard RAJAH Plugs (\$1.00 each)		\$. . .
Giant RAJAH Plugs (\$1.25 each)		\$. . .
Waterproof RAJAH Plugs (\$1.25 each)		\$. . .
Extra RAJAH Terminals, Type		\$. . .
(One Rajah Terminal included with each plug without extra charge)		

For use in motor.

Enclosed find check or money order for \$

Name

Address

City State

My Dealer's Name is

Note: If your dealer sells Rajah Spark Plugs, he will fill this order for you. We will replace the extra Rajah Porcelain he gives you, upon receipt of this order, properly filled-in.

RAJAH Auto Supply Co.

Bloomfield, N. J., U. S. A.

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NATION-WIDE ACCEPTANCE

IN ALL parts of the country, the Lincoln is known as a fast, easy-riding, smooth-running, and long-lived car. Its beauty is admired, its abilities respected. Through brilliant qualities of performance and soundness of construction, it has definitely established itself in the good opinion of the nation as a car of outstanding and enduring worth.

See any Lincoln Dealer

LINCOLN MOTOR COMPANY
DIVISION OF FORD MOTOR COMPANY, DETROIT, MICH.



The Phaeton

LINCOLN

Under the Jolly Roger

(Continued from page 18)

after which we'll rig up a stagin' over her bows and stern, and cut her new name, Maggie II, right into her plankin'. Nobody'll ever suspect her name's been changed. I notice that the official letters and numbers cut into her main beam is F-C-P-9957. I'll change that F to an E, the C to an O, and the P to an R. A handy man with a wood chisel can do lots of things. He can change those nines to eights, the five to a six, and the seven to a nine. I've seen it done before. Then we'll rig a foretopmast and a spinnaker boom on her, and bend a fisherman's staysail. Nothing like it when you're sailing a little off the wind. Scraggs, you have the papers of the old Maggie, and we all have our licenses regular enough. Dig up the old papers, Scraggs, and I'll doctor 'em up to fit the Maggie II. As for our armament, we'll dismount the guns and stow 'em away in the hold until we get down on the Colombian coast, and while we're lying in Panama repairing the holes where my shots went through her, and puttin' new planks in her decks where the old plankin' has been scored by shrapnel, those paraquets will think we're as peaceful as chipmunks. Better look over your supplies, McGuffey, and see if there's any paint aboard. I'd just as lief give the old girl a different dress before we drop anchor in Panama."

"Gib," said Captain Scraggs earnestly, "I'll keel-haul and skull-drag the man that says you ain't got a great head."

"By the lord," supplemented McGuffey, "you have."

The commodore smiled and tapped his frontal bone with his forefinger. "Imagination, my lads, imagination," he said, and reached for the last of the punch.

Exactly three weeks from the date of the naval battle which took place off the Coronado Islands, and whereby Mr. Gibney became commodore and managing owner of the erstwhile Mexican coast patrol schooner Reina Maria, that vessel sailed out of the harbour of Panama completely rejuvenated. Not a scar on her shapely lines gave evidence of the sanguinary engagement through which she had passed.

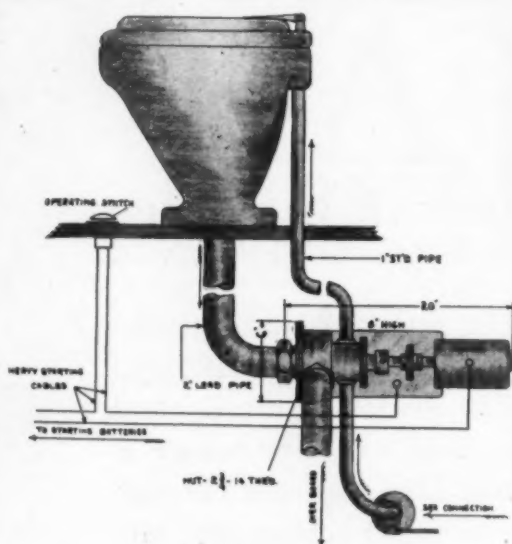
Mr. Gibney had her painted a creamy white with a dark blue waterline. She had had her bottom cleaned and scraped and the copper sheathing overhauled and patched up. Her sails had been overhauled, inspected, and repaired wherever necessary, and in order to be on the safe side, Mr. Gibney, upon motion duly made by him and seconded by McGuffey (to whom the seconding of the Gibney motions had developed into a habit), purchased an extra suit of new sails. The engines were overhauled by the faithful McGuffey and a large store of distillate stored in the hold. Captain Scraggs, with his old-time aversion to expense, made a motion (which was seconded by McGuffey before he had taken time to consider its import) providing for the abolition of the office of chief engineer while the Maggie II was under sail, at which time the chief ex-officio was to hold himself under the orders of the commodore and be transferred to the deck department if necessary. Mr. Gibney approved the measure and it went into effect. Only on entering or leaving a port, or in case of chase by an enemy, were the engines to be used, and McGuffey was warned to be extremely saving of his distillate.

Mr. Gibney had made a splendid job of changing the vessel's name, and as she chugged lazily out of Panama Bay and lifted to the long ground-swell of the Pacific, it is doubtful if even her late Mexican commander would have recognized her. She was indeed a beautiful craft, and Commodore Gibney's heart swelled with pride as he stood aft, conning the man at the wheel, and looked her over. It seemed like a sacrilege now, when he reflected how he had trained the gun of the old Maggie on her that day off the Coronados, and it seemed to him now even a greater sacrilege to have brazenly planned to enter her as a privateer in the struggles of the republic of Colombia. The past tense is used advisedly, for that project was now entirely off, much to the secret delight of Captain Scraggs, who, if the hero of one naval engagement, was not anxious to take part in another. In Panama the freebooters of the Maggie II learned that during Mr. Gibney's absence on his filibustering trip the Colombian revolutionists had risen and struck their blow. After the fashion of a hot-headed and impetuous people, they had entered the contest absolutely untrained. As a result, the war had lasted just two weeks, the leaders had been incontinently shot, and the white-winged dove of peace had once more spread her pinions along the borders of the Gold Coast.

Commodore Gibney was disgusted beyond measure, and at a special meeting of the syndicate, called in the cabin of the Maggie II that same evening, it was finally decided that they should embark on an indefinite trading cruise in the South Seas, or until such time as it seemed their services must be required to free a downtrodden people from a tyrant's yoke.

Captain Scraggs and McGuffey had never been in the South Seas, but they had heard that a fair margin of profit was to be

(Continued on page 108)



Consolidated Shipbuilding Corporation's

PATENT

Electric Flushing Toilet

No Pumping Lever,
Operated by Push Button

Solving an important problem in Motor Boat Cruising

This Electric Flusher may be used with standard plumbing fixtures on any motor boat equipped with a six volt storage battery.

Explanatory Pamphlet on Application

CONSOLIDATED
SHIPBUILDING CORPORATION
MORRIS HEIGHTS, NEW YORK CITY



Compare Champions

Step into any equipment store. Ask the man to let you look at a Champion Spark Plug side by side with any other plug.

Your own eyes will prove the exterior superiority of Champion. You will see at once how much better it is made. How finely it is finished.

But you must try Champions in your engine to know just how much better they are.

With Champions in every cylinder, you will note an immediate improvement in engine performance. Power and speed will be increased. Pick-up will be improved. All sluggishness disappears. You will actually save in oil and gas.

That Champion is the better spark plug has been proved thousands of times by boat owners. That is why Champion makes more than two-thirds of all the spark plugs produced.

You will know genuine Champions by the Double-Ribbed Core. The Blue Box sells for 75 cents. Champion X is 60 cents. (Canadian prices 90 and 80 cents.) More than 90,000 dealers sell Champions

Champion Spark Plug Company, Toledo, Ohio
Champion Spark Plug Company of Canada, Limited, Windsor, Ont.



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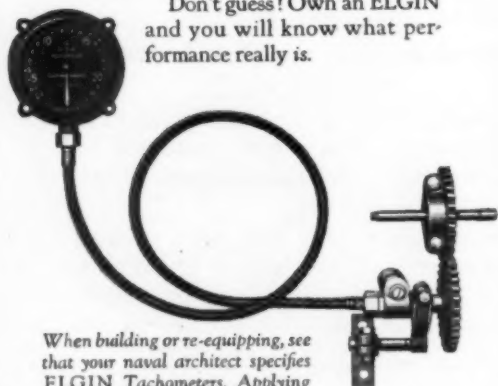
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Under the Jolly Roger

(Continued from page 106)

wrung from trade in copra, shell, coconuts, and kindred tropical products. They so expressed themselves. To this suggestion, however, Commodore Gibney waved a deprecating paw.

"Legitimate tradin', boys," he said, "is a nice, sane, healthy business, but the profits is slow. What we want is quick profits, and while it ain't set down in black and white, one of the principal objects of this syndicate is to lead a life of wild adventure. In tradin', there ain't no adventure to speak of. We ought to do a little blackbirdin', or raid some of those Jap pearl fisheries off the northern coast of Formosa."

"But we'll be chased by real gunboats if we do that," objected Captain Scraggs. "Those Jap gunboats shoot to kill. Can't you think of somethin' else, Gib?"

"Well," said Mr. Gibney, "for a starter, I can. Suppose we just head straight for Kandavu Island in the Fijis, and scheme around for a cargo of black coral? It's only worth about fifty dollars a pound. Kandavu lays somewhere in latitude 22 south, longitude 178 west, and when I was there last it was fair reekin' with cannibal savages. But there's tons of black coral there, and nobody's ever been able to sneak in and get away with it. Every time a boat used to land at Kandavu, the native niggers would have a white-man stew down on the beach, and it's got so that skippers give the island a wide berth."

"Gib, my dear boy," chattered Captain Scraggs, "I'm a man of peace and I—I—"

"Scraggsy, old stick-in-the-mud," said Mr. Gibney, laying an affectionate hand on the skipper's shoulder, "you're nothin' of the sort. You're a fightin' tarantula, and nobody knows it better'n Adelbert P. Gibney. I've seen you in action, Scraggsy. Remember that. It's all right for you to say you're a man of peace and advise me and McGuffey to keep out of the track of trouble, but we know that away down low you're goin' around lookin' for blood, and that once you're up agin the enemy, you never bat an eyelash. Eh, McGuffey?"

McGuffey nodded; whereupon, Captain Scraggs, making but a poor effort to conceal the pleasure which Mr. Gibney's rude compliment afforded him, turned to the rail, glanced seaward, and started to walk away to attend to some trifling detail connected with the boat falls.

"All right, Gib, my lad," he said, affecting to resign himself to the inevitable, "have it your own way. You're a commodore and I'm only a plain captain, but I'll follow wherever you lead. I'll go as far as the next man and we'll glom that black coral if we have to slaughter every man, woman, and child on the island. Only, when we're sizzlin' in a pot don't you up and say I never warned you, because I did. How d'ye propose intimidatin' the natives, Gib?"

"Scraggsy," said the commodore solemnly, "we've waged a private war agin a friendly nation, licked 'em, and helped ourselves to their ship. We've changed her name and rig and her official number and letters and we're sailin' under bogus papers. That makes us pirates, and that old Maggie burgee floatin' at the fore ain't nothin' more nor less than the Jolly Roger. All right! Let's be pirates. Who cares? When we slip into M'galao harbour we'll invite the king and his head men aboard for dinner. We'll get 'em drunk, clap 'em in double irons, and surrender 'em to their weepin' subjects when they've filled the hold of the Maggie II with black coral. If they refuse to come aboard we'll shell the bush with that long gun and the Maxim rapid-fire guns we've got below decks. That'll scare 'em so they'll leave us alone and we can help ourselves to the coral."

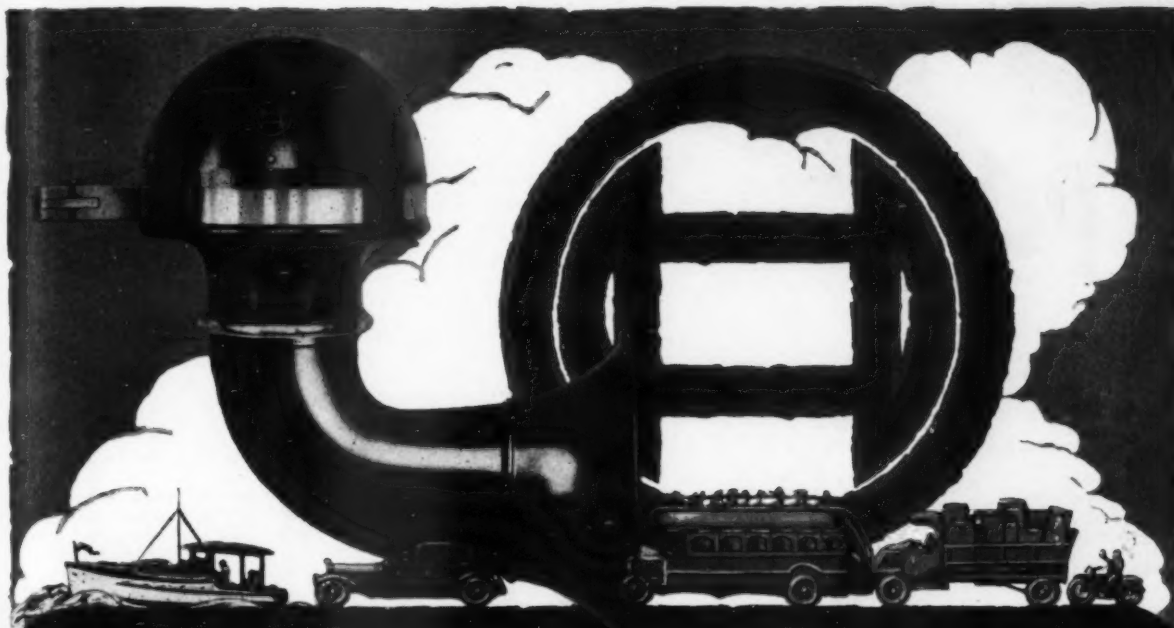
"Scraggsy's cold blue eyes glistened. "Lord, Gib," he murmured, "you've got a head."

"Like playin' post-office," was McGuffey's comment.

The commodore smiled. "I thought you boys would see it that way. Now to-morrow I'm going ashore to buy three divin' outfits and lay in a big stock of provisions for the voyage. In the meantime, while the carpenters are gettin' the ship into shape, we'll leave the first mate in charge while we go ashore and have a good time. I've seen worse places than Panama."

As a result of this conference Mr. Gibney's suggestions were acted upon, and they contrived to make their brief stay in Panama very agreeable. They inspected the work on the canal, marveled at the stupendous engineering in the Culebra Cut, drank a little, gambled a little. McGuffey whipped a bartender. He was ordered arrested, and six spiggoty little policemen, sent to arrest him, were also thrashed. The reserves were called out and a riot ensued. Mr. Gibney, following the motto of the syndicate, i. e.,

All for one and one for all—
United we stand, divided we fall,
(Continued on page 110)



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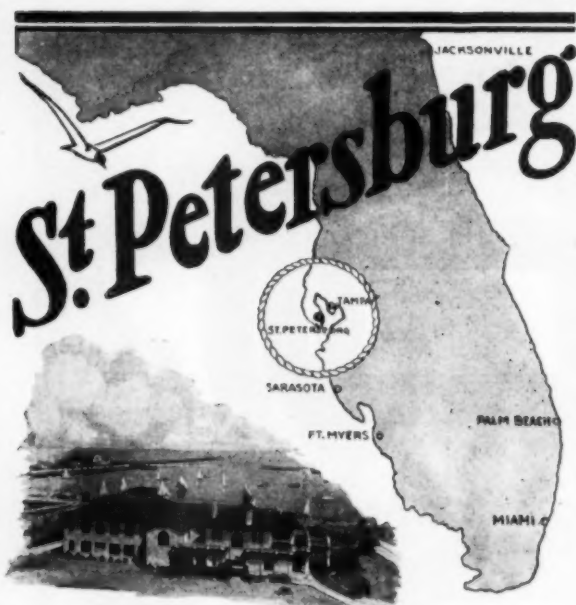
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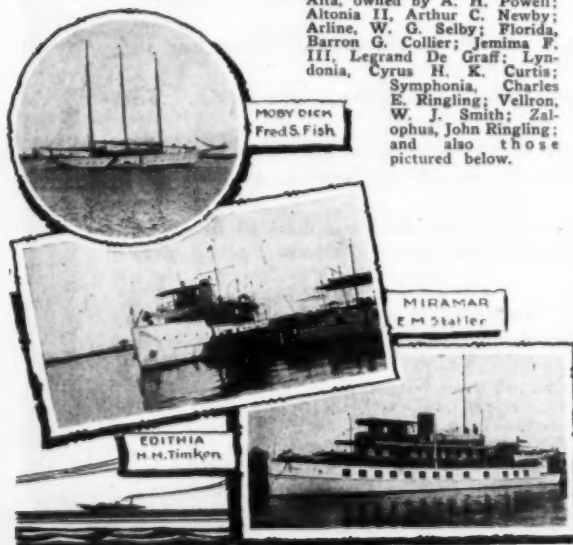
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Information about this city, the harbors along the West Coast of Florida or any other facts will be promptly furnished by A. B. Coad, Secretary, Chamber of Commerce, St. Petersburg, Florida.

Among the famous boats that have visited St. Petersburg during the last few months are: Alta, owned by A. H. Powell; Altonia II, Arthur C. Newby; Arline, W. G. Selby; Florida, Barron G. Collier; Jemima F. III, Legrand De Graff; Lyndonia, Cyrus H. K. Curtis; Symphonica, Charles E. Ringling; Vellron, W. J. Smith; Zalophus, John Ringling; and also those pictured below.



Advertising Index will be found on page 158

Under the Jolly Roger

(Continued from page 108)

mixed in the conflict and presently found himself in durance vile. Captain Scraggs, luckily, forgot the motto and escaped, but inasmuch as he was on hand next morning to pay a fine of thirty pesos levied against each of the culprits, he was instantly forgiven. Mr. Gibney vowed that if a United States cruiser didn't happen to be lying in the roadstead, he would have shelled the town in retaliation.

But eventually the days passed, and the Maggie II, well found and ready for sea, shook out her sails to a fair breeze and sailed away for Kandavu. She kept well to the southwest until she swung around on her course, headed straight for her destination. It was a pleasant voyage, devoid of incident, and the health of all hands was excellent. Mr. Gibney took daily observations, and was particular to make daily entries in his log when he, Scraggs, and McGuffey were not playing cribbage, a game of which all three were passionately fond.

On the afternoon of the twenty-ninth day after leaving Panama the lookout reported land. Through his glasses Mr. Gibney made out a cluster of tall palms at the southerly end of the island, and as the schooner held lazily on her course he could discern the white breakers foaming over the reefs that guarded the entrance to the harbour.

"That's Kandavu, all right," announced the commodore. "I was there in '89 with Bull McGinty in the schooner Dashin' Wave. There's the entrance to the harbour, with the Esk reefs to the north and the Pearl reefs to the south. The channel's very narrow—not more than three cables, if it's that, but there's plenty of water and a good muddy bottom that'll hold. McGuffey, lad, better run below and tune up your engines. It's too dangerous a passage on an ebb-tide for a sailin' vessel, so we'll run in under the power. Scraggsy, stand by and when I give the word have your crew shorten sail."

Within a few minutes a long white streak opened up in the wake of the schooner, announcing that McGuffey's engines were doing duty, and a nice breeze springing up two points aft the beam, the Maggie heeled over and fairly flew through the water. Mr. Gibney smiled an ecstatic smile as he took the wheel and guided the schooner through the channel. He rounded her up in twelve fathoms, and within five minutes every stitch of canvas was clewed down hard and fast. The sun was setting as they dropped anchor, and Mr. McGibney had lanterns hung along the rail so that it would be impossible for any craft to approach the schooner and board her without being seen. Also the watch on deck that night carried Mauser rifles, six-shooters, and cutlasses. Mr. Gibney was taking no chances.

Now, boys," announced Commodore Gibney, as he sat at the head of the officers' mess at breakfast next morning, "there'll be a lot of canoes paddling off to visit us within the hour, so whatever you do, don't allow more than two of these cannibals aboard the schooner at the same time. Make 'em keep their weapons in the canoes with 'em, and at the first sign of trouble shoot 'em down like dogs. It may be that these precautions ain't necessary, but when I was here twenty years ago it was all the rage to kill a white man and eat him. Maybe times has changed, but the harbour and the coast looks just as wild and lonely as they ever did, and I didn't see no sign of missionary when we dropped hook last night. So don't take no chances."

All hands promised that they would take extreme care, to the end that their precious persons might remain intact, so Mr. Gibney finished his cup of coffee at a gulp and went on deck.

The Kandavu aborigines were not long in putting in an appearance. Even as Mr. Gibney came on deck half a dozen canoes shot out from the beach. Mr. Gibney immediately piped all hands on deck, armed them, and nonchalantly awaited the approach of what might or might not turn out to be an enemy.

When the flotilla was within pistol shot of the schooner Mr. Gibney stepped to the rail and motioned them back. Immediately the natives ceased paddling, and a wild-looking fellow stood up in the forward canoe. After the manner of his kind he had all his life soused his head in lime-water when making his savage toilette, and as a result his shock of black hair stood on end and bulged out like a crowded hayrick. He was naked, of course, and in his hand he held a huge war club.

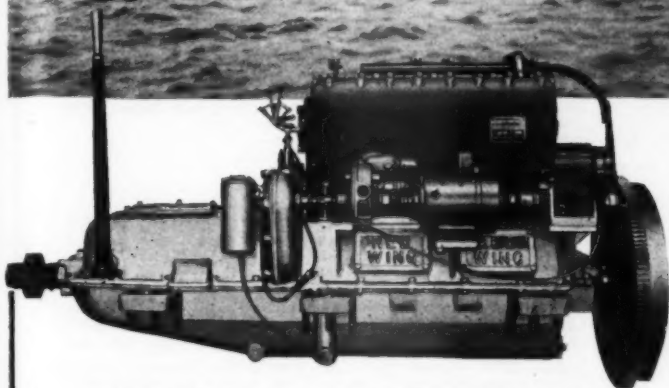
"That feller'd eat a rattlesnake," gasped Captain Scraggs. "Shoot him, Gib, if he bats an eye."

"Shut up," said the commodore, a trifle testily; "that's the number-one nigger, who does the talkin'. Hello, boy."

"Hello, cap'n," replied the savage, and salaamed gravely. "You likee buy chicken, buy pig? Maybe you say come 'board, I talk. Me very good friend white master."

"Bless my sweet-scented soul!" gasped the commodore. "What won't them missionaries do next? Cut off my ears if this nigger ain't civilized!" He beckoned to the canoe and it

(Continued on page 114)



Model B 32-40 H. P. Red Wing "THOROBRED," the power plant used in the majority of Capt. Thompson's boats illustrated above.

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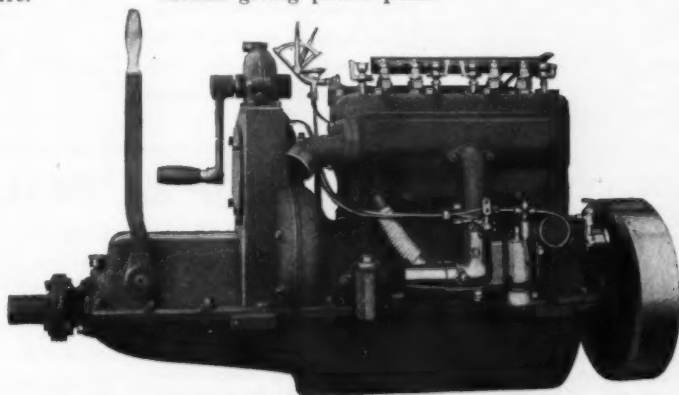
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- Chart No. 29—New Jersey Coast, Bay Head to New York Harbor
- Chart No. 30—Chesapeake Bay, Smith Point to Cape Charles
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- Chart No. 32—York and James Rivers
- Chart No. 33—Delaware Coast, Cape Henlopen to Chincoteague Inlet
- Chart No. 34—Virginia Coast, Chincoteague Inlet to Cape Charles
- Chart No. 35—Virginia Coast, Cape Henry to Albemarle Sound
- Chart No. 36—Albemarle Sound, North Carolina
- Chart No. 37—Pamlico Sound, North Carolina

Chart No. 38—North Carolina Coast, Core Sound to New River Inlet

Chart No. 39—Carolina Coast, From Cape Fear to Winyah Bay

Chart No. 40—South Carolina Coast—From Winyah Bay to St. Helena Sound

Chart No. 41—Georgia Coast—From St. Helena to Doboy Sound

Chart No. 42—Lake Michigan, Southern Part

Chart No. 43—Lake Michigan, Northern Part

Chart No. 44—Lakes Michigan and Huron

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Chart No. 47—Florida Coast

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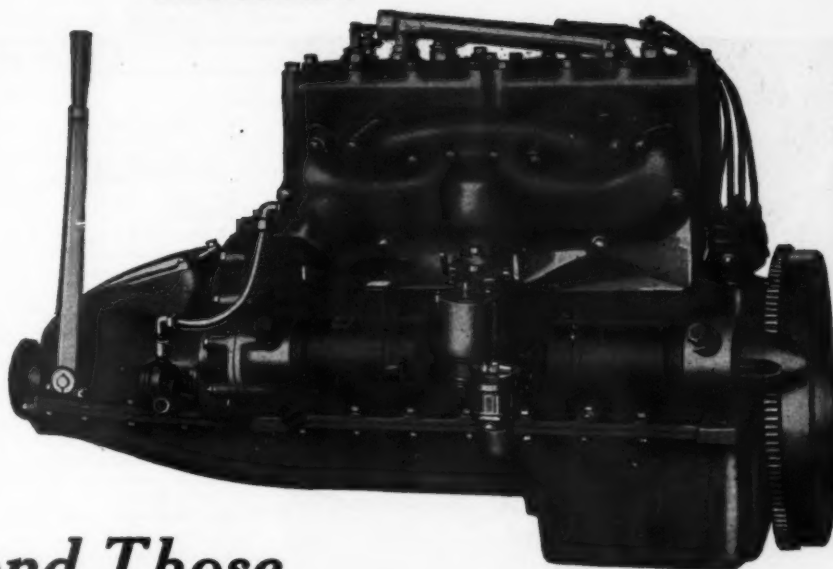


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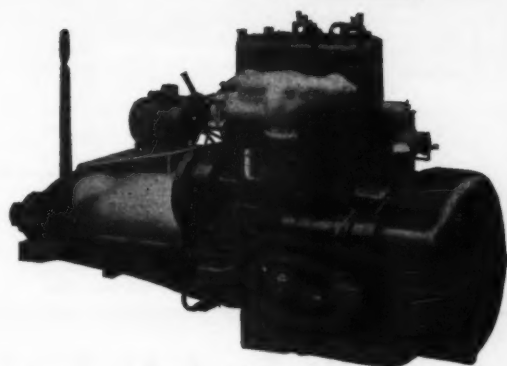
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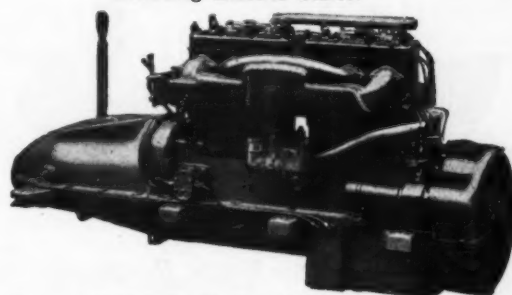
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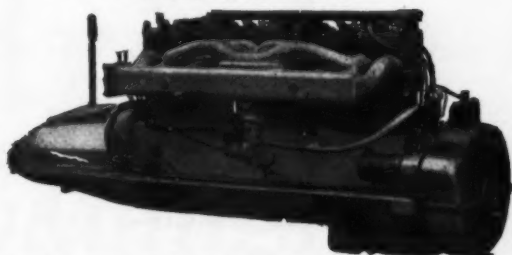
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Under the Jolly Roger

(Continued from page 110)

shot alongside, and its brown crew came climbing over the rail of the Maggie II.

Mr. Gibney met the spokesman at the rail and they rubbed noses very solemnly, after the manner of salutation in Kandavu. Captain Scraggs hustled forward, full of importance.

"Interduce me, Gib," he said amiably, and then, while Mr. Gibney favoured him with a sour glance, Captain Scraggs stuck out his hand and shook briskly with the native.

"Happy to make your acquaintance," he said. "Scraggs is my name, sir. Shake hands with McGuffey, our chief engineer. Hope you left all the folks at home well. What'd you say your name was?"

The islander hadn't said his name was anything, but he grinned now and replied that it was Tabu-Tabu.

"Well, my bucko," muttered McGuffey, who always drew the colour line, "I'm glad to hear that. But you ain't the only thing that's taboo around this packet. You can jest check that war club with the first mate, pendin' our better acquaintance. Hand it over, you black beggar, or I'll hit you a swat in the ear that'll hurt all your relations. And hereafter, Scraggsy, just keep your nigger friends to yourself. I ain't waxin' effusive over this savage, and it's agin my principles ever to shake hands with a coloured man. This chap's a damned ugly customer, and you take my word for it."

Tabu-Tabu grinned again, walked to the rail, and tossed his war club down into the canoe.

"Me good missionary boy," he said rather humbly.

"McGuffey, my dear boy," protested Captain Scraggs, "don't be so doggone rude. You might hurt this poor lad's feelin's. Of course he's only a simple native nigger, but even a dawg has feelin's. You—"

"A-r-r-rh!" snarled McGuffey.

"You two belay talkin' and snappin' at each other," commanded Mr. Gibney, "an' leave all bargainin' to me. This boy is all right and we'll get along first rate if you two just haul ship and do somethin' useful besides buttin' in on your superior officer. Come along, Tabu-Tabu. Makee little eat down in cabin. You talkee captain."

"Gib, my dear boy," sputtered Captain Scraggs, bursting with curiosity, following the commodore's reappearance on deck, "whatever's in the wind?"

"Money—fortune," said Mr. Gibney solemnly.

McGuffey edged up and eyed the commodore seriously. "Sure there ain't a little fightin' mixed up in it?" he asked.

"Not a bit of it," replied Mr. Gibney. "You're as safe on Kandavu as if you was in church. This Tabu kid is sort of prime minister to the king, with a heap of influence at court. The crew of a British cruiser stole him for a galley police when he was a kid, and he got civilized and learned to talk English. He was a cannibal in them days, but the chaplain aboard showed him how foolish it was to do such things, and finally Tabu-Tabu got religion and asked as a special favour to be allowed to return to Kandavu to civilize his people. As a result of Tabu-Tabu's efforts, he tells me the king has concluded that when he eats a white man he's flyin' in the face of his own interests, and most generally a gunboat comes along in a few months and shells the bush, and—well, anyhow, there ain't been a barbecue on Kandavu for ten years. It's a capital crime to eat a man now, and punishable by boilin' the offender alive in palm oil."

"Well," rumbled McGuffey, "this Tabu-Tabu don't look much like a preacher, if you ask me. But how about this black coral?"

"Oh, I've ribbed up a deal with him," said Mr. Gibney. "He'll see that we get all the trade we can lug away. We're the first vessel that's touched here in two years, and they have a thunderin' lot of stuff on hand. Tabu's gone ashore to talk the king into doin' business with us. If he consents, we'll have him and Tabu-Tabu and three or four of the sub-chiefs aboard for dinner, or else he'll invite us ashore for a big feed, and we'll have to go."

"Supposin' this king don't care to have any truck with us?" inquired McGuffey anxiously.

"In that case, Mac," replied the commodore with a smile, "we'll just naturally shell him out of house and home."

"Well, then," said McGuffey, "let's get the guns ready. Somethin' tells me these people ain't to be trusted, and I'm tellin' you right now, Gib, I won't sleep well to-night unless them two quarter gatlings and the Maxim-Vickers rapid-fire guns is mounted and ready for business."

"All right, Mac," replied Mr. Gibney, in the tone one uses when humouring a baby. "Set 'em up if it'll make you feel

(Continued on page 118)

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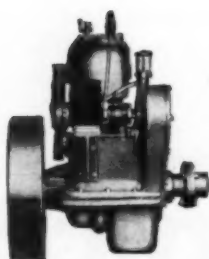
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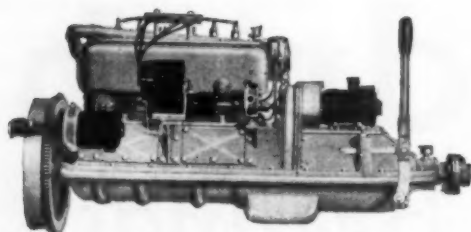
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The fact that Kermath has been manufacturing the Vanadium 20 successfully for a period of 12 years, has particular significance to anyone contemplating the purchase of a marine engine for average use.

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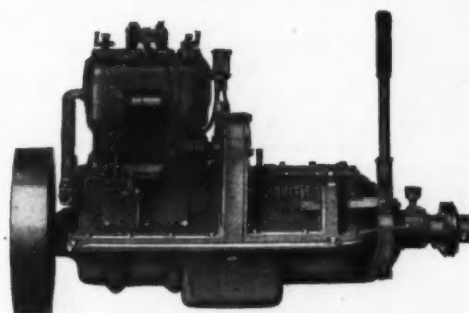
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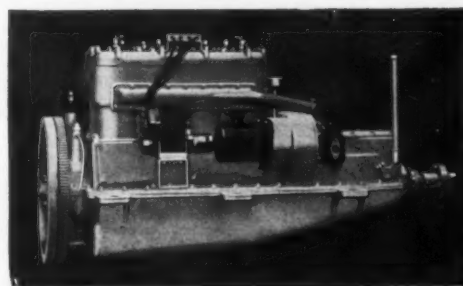
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12 H. P. Weight 470 lbs. \$470
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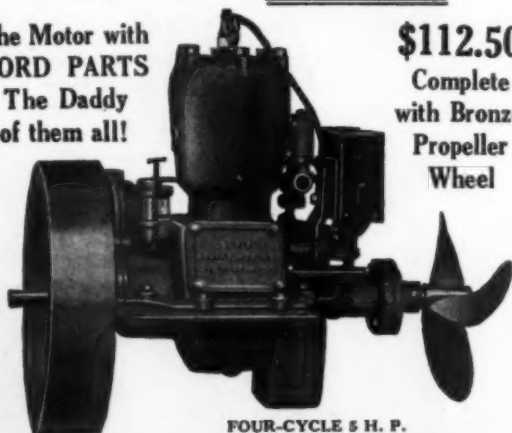
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NEW ORLEANS, LA.

Under the Jolly Roger

(Continued from page 114)

more cheerful. Still, I don't see why you want to go actin' so foolish over nothin'."

"Well, Gib," replied the engineer, "I may be crazy, but I ain't no fool, and if there's a dead whale around the ship, I can come pretty near smellin' it. I tell you, Gib, that Tabu-Tabu nigger had a look in his eye for all the world like a cur dog lickin' a bone. I ain't takin' no chances. My old man used to say: 'Bart, whatever you do, allers have an anchor out to the windward.'"

"By the left hind leg of the Great Sacred Bull," snapped Captain Scraggs, "if you ain't enough to precipitate war."

"War," replied McGuffey, "is my long suit—particularly war with native niggers. I just naturally crave to punch the ear of anything darker than a Portugee. Remember how I cleaned out the police department of Panama?"

"Mount the guns if you're goin' to, Mac. If not, for the love of the Lord don't be demoralizin' the crew with this talk of war. All I ask is that you set the guns up after I've finished my business here with Tabu-Tabu. He's been on a war vessel, and knows what guns are, and if he saw you mountin' them it might break up our friendly relations. He'll think we don't trust him."

"Well, we don't," replied McGuffey doggedly.

"Well, we do," snapped Captain Scraggs.

There is always something connected with the use of that pronoun of kings which eats like a canker at the heart of men of the McGuffey breed. That officer now spat on the deck, in defiance of the rules of his superior officers, and glared at Captain Scraggs.

"Speak for yourself, you miserable little little wart," he roared. "If you include me on that cannibal's visitin' list, and go to contradictin' me again, I'll—"

"Mac," interrupted Mr. Gibney angrily, "control yourself. It's agin the rules to have rag-chewin' and backbitin' on the Maggie II. Remember our motto: 'All for one and one for all'—"

"Here comes that sneakin' bushy-headed murderer back to the vessel," interrupted McGuffey. "I wonder what devilment he's up to now."

Mr. McGuffey was partly right, for in a few minutes Tabu-Tabu came alongside, climbed aboard, and salaamed. Mr. Gibney, fearful of McGuffey's inability to control his antipathy for the race, beckoned Captain Scraggs and Tabu-Tabu to follow him down into the cabin. Meanwhile, McGuffey contented himself by parading backward and forward across the fo'castle head with a Mauser rifle in the hollow of his arm and his person fairly bristling with pistols and cutlasses. Whenever one of the flotilla of canoes hove to at a respectful distance, showed signs of crossing an imaginary deadline drawn by McGuffey, he would point his rifle at them and swear horribly. He scowled at Tabu-Tabu when that individual finally emerged from the conference with Mr. Gibney and Scraggs and went over the side to his waiting canoe.

"Well, what's in the wind this time?" inquired McGuffey.

"We're invited to a big feed with the king of Kandavu," replied Captain Scraggs, as happy as a boy. "Hop into a clean suit of ducks, Mac, and come along. Gib's goin' to broach a little keg of liquor and we'll make a night of it."

"Good lord," groaned McGuffey, "does the man think I'm low enough to eat with niggers?"

"Leave him to his own devices," said Mr. Gibney indulgently. "Mac's just as Irish as if he'd been born in Dublin instead of his old man. Nobody yet overcome the prejudice of an Irishman so we'll do the honours ourself, Scraggsy, old skittles, and leave Mac in charge of the ship."

"Mind you're both back at a seasonable hour," warned McGuffey. "If you ain't, I'll suspect mischief and—say! Gib! Well, what's the use talkin' to a man with an imagination? Only if I have to go ashore after you two, those islanders'll date time from my visit, and don't you forget it."

It was nearing four o'clock that afternoon when Commodore Gibney and his navigating officer, Captain Scraggs, both faultlessly arrayed in Panama hats, white ducks, white canvas shoes, cut low, showing pink silk socks, and wearing broad, black silken sashes around their waists, climbed over the side into the whaleboat and were rowed ashore in a manner befitting their rank. McGuffey stood at the rail and jeered them, for his democratic soul could take no cognizance of form or ceremony to a cannibal king, or at least a king but recently delivered from cannibalism.

(To be concluded)

Evinrude's New York Branch Moves

Announcement has just been made by the Evinrude Motor Company of Milwaukee, Wisconsin, that their New York branch has moved from the old location at 69 Cortlandt Street, to more spacious quarters at 115 East 23rd Street.

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Ole Evinrude designed the Elto Light-Weight Twin for your *complete* enjoyment. He has not only provided for your convenience and comfort in carrying the Motor where you want to go by building the most compact of all Motors and the lightest for its H. P. (less than 17 lbs. per H. P.), but he has also thought of your comfort after you are on the lake. He has given you—



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Matchless Speed made possible by its full 3 H. P. and streamline design. With an Elto you never trail. You always set the pace. You not only get away with a quick flying start, but you continually enjoy the thrill of faster speed and greater power which only Elto gives.

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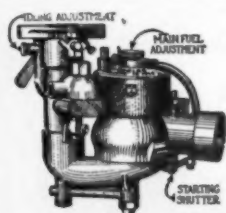
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ENSIGN
Recommended by Makers of
Stearns Marine Engines

An Inexpensive Mooring

(Continued from page 40)

rather than just the length; therefore, the following table will give a general idea as to what is required.

Length	Chain for boats			Concrete block for boats			Anchor for boats		
	Light	Medium	Heavy	Light	Medium	Heavy	Light	Medium	Heavy
Feet	Inches	Inches	Inches	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
20-25	3/4	3/4	3/4	200	250	300	30	30	40
26-30	3/4	3/4	3/4	300	350	400	40	45	50
31-35	3/4	3/4	3/4	450	500	550	50	60	70
36-40	3/4	3/4	3/4	550	550	600	80	100	125
41-50	3/4	3/4	3/4	650	650	700	125	150	200
51-60	3/4	3/4	3/4	750	750	800	200	300	400

Scope of cable from buoy to concrete block, when boat is moored, should be from four to six times depth of water at high tide.

Scope of cable from concrete block to mushroom anchor, should be twice the depth of water at high tide.

Size of keg or barrel should be ample to float length of chain one and one half times depth of water at high tide.

The concrete block is cast in a wooden mold, with the eye-bolt, nut, and two rods which have been bent as shown, set into position so the concrete will set around it. As soon as it hardens, the wooden mold can be easily knocked apart.

It may seem that the sizes as given in the above table, are excessively heavy; however, when you consider that the safety of your boat depends on the mooring holding under abnormal conditions, as well as the amount of money invested in your outfit, it is really very cheap insurance to err rather heavily on the heavy side when constructing the mooring. If the average boat owner would play safe in matters of this nature, as well as other things, when getting his boating outfit ready for use, the regular marine insurance rates would be lower.

As a last word of caution, remember that no matter how strong and heavy your mooring is, if the cleats, bitts or posts aboard ship are not strong enough to stand the heavy strains to which it will be subjected; the mooring is of no value to the boat's safety. Make sure that they are oversize and securely fastened to beams or timbers which are heavy enough and fastened in such a manner as to stay connected with the hull. Bolts are preferable to screws, and they should be of galvanized iron.

V. L. S., Wilmington, Del.

Moorings for Large and Small Craft

TWO types of moorings are illustrated in the drawing, both of which have proven very convenient to handle, and pick up from the boats deck.

The first one is for small boats only, (or larger boats in exceptionally quiet anchorages where space is at a premium) and is often used in crowded anchorages. The use of a loose continuous line from buoy to buoy does away with the work of rowing the boat into position to pick up the stern line after the bow line is fastened, as the boat can be swung into position between the buoys by pulling in on the stern end of this mooring line. In leaving the mooring, the line is simply loosened from both bow and stern bitts and cast overboard. On your return to the mooring this line is easily picked up.

For larger boats, or boats which can be moored to swing with wind or tide, the type of mooring shown in lower sketch has been found very easily handled. The mooring line in this case is fastened to the mooring buoy by means of a screw shackle. The rope has a thimble in the eye to prevent wear or cutting, and is spliced to make a neat eye. Two or three cork net floats are fastened with marlin on this line, about two feet apart, so that it will float and facilitate picking up on returning to the mooring place. Like the first type, this line is dropped overboard when the boat leaves the mooring, and picked up with a boat-hook on its return.

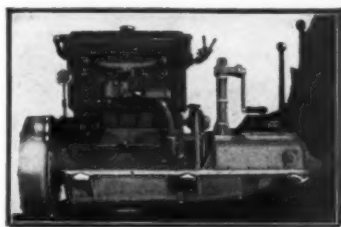
A good well constructed mooring can buoy or better still a cork buoy should be used. A cork buoy, while more expensive, will not mar the boat when vagaries of wind and tide bring them rubbing together. A keg well protected with rubber hose or automobile tires to prevent chafing the boat is also good, but is liable to dry out in winter when ashore.

A good run of heavy chain (about four times the maximum depth of water at mooring) with a mushroom anchor on the other end will complete the mooring. In selecting the mushroom anchor get one twice as big as you think will hold her, and when it blows a stiff north easter you can rest assured your boat will still be there when the end of the week rolls around.

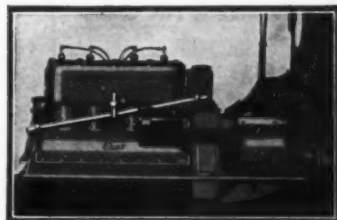
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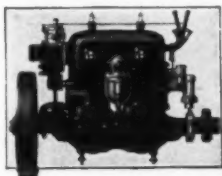
Model "V", $3\frac{1}{2}$ " bore x 5" stroke, from \$465 to \$720, depending on equipment, weight 550 pounds, used by United States Government, pressure lubricated, new catalog just off press.



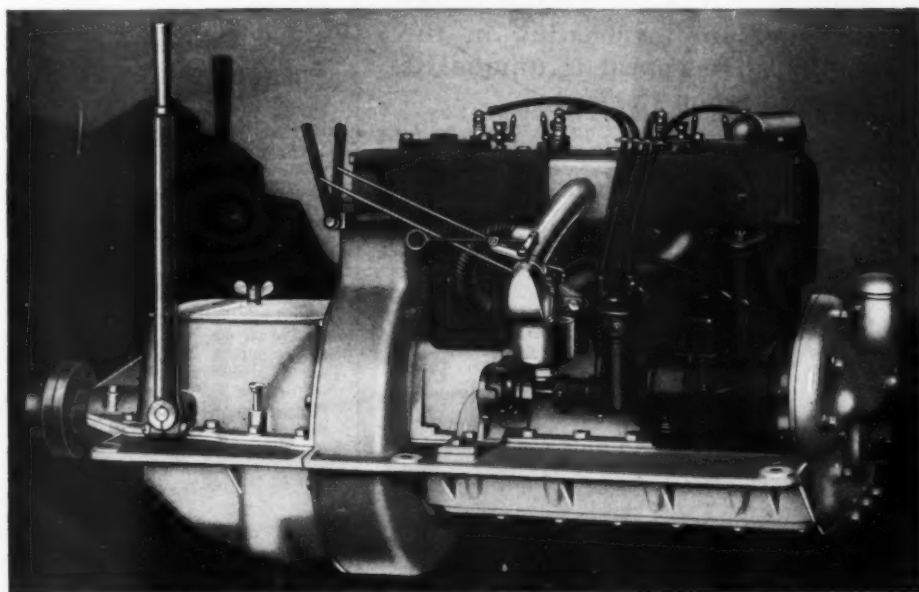
Starter side. Model "Z" Length $41\frac{1}{2}$ " over all. 62% of entire surface is aluminum. Greatest depth 16.00" base $6\frac{3}{4}$ ", Height $14\frac{1}{2}$ "

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\$395
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Advertising Index will be found on page 158

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THE
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Business Office:

Hotel Addison Detroit

W. D. Edenburn, Editor

Imp, A Smart Runabout

(Continued from page 80)

mentioned under deck fittings. There will also be one hand bilge pump, buoy and cushions, brass bell, fog horn, and fire extinguisher to comply with the regulations.

Painting: The interior of the hull is to be painted during the construction and is to receive one coat of hot linseed oil throughout before paint or varnish is applied. The bottom seams are to be filled with seam composition and smoothed down. Then it will receive two coats of green copper bottom paint, while the top sides above the water line may be finished naturally or painted white as desired. If finished in white there should be a 1/2-inch gold stripe with a neat arrow head on the bow and a feather on the stern. Stripes and arrows are to be cut into the planking. All exterior mahogany work in the cockpit and on decks to be finished bright with three coats of good spar varnish properly rubbed down between each coat.

Machinery: The engine is to be a four-cylinder 2 3/4 by 4-inch Universal motor, developing 12 h. p. at 1,400 revolutions. This is to be installed in a first-class manner and so arranged that the exhaust will pass through the stern transom on the starboard side by means of No. 18 copper tubing.

Shafting: This is to be of 3/8-inch diameter Tobin bronze in one length from the motor coupling to the propeller. It is to be connected to the motor by a suitable coupling.

Propeller and Strut: This should be a three-blade bronze wheel, 13 inches diameter and 14 inches pitch, properly secured to the shaft with a key and lock nuts. The taper in the propeller bore is to be the standard for this size shafting. A stuffing box of the inside type or a shaft log are to be secured to the keel in a proper manner. A strut of bronze located as per plan and of the V type, shall be fitted as required.

Gasoline Tank: An 18 gauge copper gasoline tank shall be provided and installed under the after deck. Seams shall be riveted and sweated. It should be of about 25 gallons capacity and connected to the carburetor of the engine with 3/8-inch copper tubing and standard SAE solderless fittings. A suitable strainer and shut-off valves to be fitted in the gasoline line, one valve at the tank, and one valve and the strainer at the carburetor. A 1 1/2-inch brass fill pipe, and a 3/8-inch brass up feed tube and 1/4-inch air connection shall also be provided in the tank. A large size vacuum tank may be installed if desired, and properly connected to engine and tank.

Large Engine Markets Abroad

(Continued from page 46)

not yet well suited for pleasure boating, Sydney, on the other hand, with its wonderful landlocked harbor indented with numerous little bays, and with its calm waters, has every essential for the sport. Another advantage is the habit of wealthy persons in building beautiful homes on the many inlets, the essential feature of which is a yacht—somewhat as along Long Island Sound.

Around the coast of Victoria there are many harbors from which many fishing boats 30 to 40 feet long operate. Practically all of these are fitted with engines. These fleets are increasing with the increased demands for fish from a spreading population.

The type engine most favored by these is 10 h.p., two or four cycle, one or two cylinder, four stroke, or single cylinder double stroke. At pleasure resorts near Sydney and Melbourne are numerous small pleasure boats for hire, fitted with a scattering of sizes and makes.

For use in pleasure boats the type preferred are the four stroke, two to four cylinder motors up to 20 h.p., with high tension ignition, preferably magneto. A two cylinder slow speed engine, 10 to 40 h.p. would be most needed for small commercial craft and as auxiliary to sail. The Australian does not like unnecessary gadgets, so a plain engine of simple mechanism is his demand. Kerosene burning attachments on the smaller engines have not been generally successful.

There is also comparatively little demand for the high priced engine. By the same token, the outboard motor is favored, there being some 30 around Victoria and 50 in and around Sydney.

There is a medium demand for equipment and accessories. With a careful study of present conditions and the proper selection of agents there is every chance for building up a demand for accessories and engines. Although local concerns have attempted, and are now building, their own engines, they are evidently getting nowhere with them yet, although they promise high. If American engine manufacturers are desirous of developing their old business in Australia, they should quote

(Continued on page 124)

A Real Boat Motor Built for Boatmen by Real Boatmen



THE old salt and the experienced yachtman can generally tell the difference between a real boat motor, designed and built by real boatmen, and a so-called marine motor built by landlubbers who never cruised out of sight of land.



Photo, Edwin Levick, N. Y.

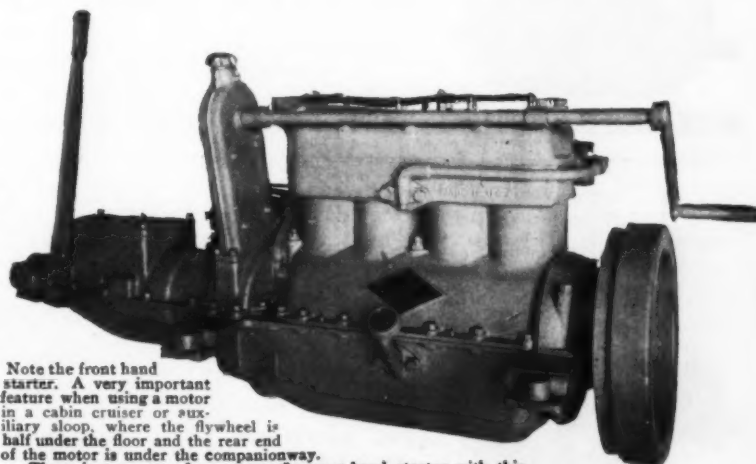
C. A. Carlson, Commodore, Keyport Yacht Club, President and General Manager, New Jersey Motors, Inc. Over 25 years of marine engine experience.

The price of the N. J. M. is \$440, completely equipped. Last year we listed the engine only at \$375 but we found that 90% of our customers required the complete engine equipment so the 1924 price includes Covered Reverse Gear, Never Failing Rear or Front Hand Starter and Magneto, as well as carburetor, water pump and everything else ready to run. Remember this when you compare the price with others.

Better Write or Wire Today
Boat Builders and Engine Dealers

Get our dealer's proposition on the N. J. M. Easy sales, prompt deliveries and sure profits for you.

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Keyport, New Jersey U. S. A.
Cable Address: "Nujermo," Keyport



Note the front hand starter. A very important feature when using a motor in a cabin cruiser or auxiliary sloop, where the flywheel is half under the floor and the rear end of the motor is under the companionway.

There is no extra charge over the rear hand starter with this additional attachment. We are always making improvements that adapt the N. J. M. to all conditions.

There's no question about how to classify the N. J. M. once you look over its design. Sticking out all over this motor are typical boat features, put there by men who know and appreciate average and extraordinary boat conditions.

That's why you see the N. J. M. in so many fishing boats and work boats, as well as in runabouts, cruisers and auxiliaries owned by men who know more about boats than most of them. This engine is built for service, and it is full of features that will make you say, "Only a real boatman would think of that." Our factory is on tide-water where boating and fishing are important industries.

The N. J. M. is a first class four-cylinder four-cycle engine of genuine marine type. We have made the essential parts interchangeable so that the N. J. M. owner can get new parts and expert repair service promptly and economically from any Ford Service Station.

We have made it easy for every boat lover to have a good engine in his boat. By our Easy Payment Plan you can buy a brand new N. J. M. with a small down payment and pay the balance while you are using the engine.

Don't delay if you want prompt delivery this spring. We've been busy all winter but our stock of motors is moving fast now.

Connect your engine by solid shaft to propeller

KITCHEN RUDDERS
take the place of rudders and reverse gears



On any size or type of boat for pleasure or commercial use, the Kitchen Patent Rudder takes the place of rudder and reverse gear, and gives more perfect control and better maneuvering ability with less weight and less mechanism. Hundreds of installations in successful use.

FOR OUTBOARD MOTORS

Specially designed Kitchen Rudders for outboard motors which can be quickly attached to Evinrude, Elto, Johnson, Spinaway and Lockwood-Ash, etc. and enables you to stop your boat in its own length, rotate your boat on its own axis, proceed in the ahead or astern direction at all speeds from zero to maximum without throttling or changing your motor speed. Ideal for trolling.

The Kitchen Rudder steers, brakes, reverses and manoeuvres more perfectly than with any other method of control; this rudder doubles the pleasure of outboard motor boating.

Prices and full details upon application
Attractive proposition open to outboard motor agents, please write.

The McNab-Kitchen Rudder Corp.
Bridgeport, Conn., U. S. A.

THE JOHNSON MARINE REVERSE GEAR

An Absolutely Reliable Gear

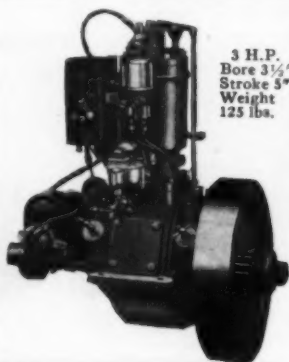
is a big factor in the satisfaction you derive from your motor boat. And absolute reliability means nothing less than a Johnson Gear.



Made in six sizes, from
1—50 H. P.

Write Department 25
for our Catalog.

THE CARLYLE JOHNSON MACHINE CO. MANCHESTER CONN.



3 H.P.
Bore 3 1/2"
Stroke 5"
Weight
125 lbs.

THE "BARBER"

The "BARBER" is a long stroke four cycle overhead valve engine with sufficient bore and stroke to easily develop more than its rated horsepower. Oils direct to piston and connecting rod. Dual ignition, magneto, coil and batteries, Schebler carburetor, hot-spot manifold and aluminum base.

Write today for prices.

KING BROTHERS,

500 East Water St.,
Syracuse, N. Y.
Successor to
BARBER BROS.

Large Engine Markets Abroad

(Continued from page 122)

attractive prices and make liberal yet sound agency arrangements, it is recommended.

A valuable suggestion is made by Assistant Trade Commissioner Pauly, at Melbourne, in regard to advertising. American boating magazines are well read here, he reported, and it would be advantageous for engine manufacturers to include in their advertisements the names of their foreign agents, with addresses. This would apply also to other foreign fields for marine equipment, and would save many months now wasted in correspondence between prospective foreign buyers and manufacturers in this country.

William Atkin to Design for MoToR Boating

(Continued from page 24)

for MoToR BOATING of anyone in America. William Atkin whose designs of small boats as well as large craft, are known wherever boats float and breezes blow. According to Lloyd's Register of American Yachts, a count of the boats built in 1923 shows that Mr. Atkin designed more of them than any other designer.

Mr. Atkin will design two boats for us exclusively, each month. The complete plans and specifications of both of Mr. Atkin's designs will be published each month in MoToR BOATING beginning with the June number. One of the boats in each issue will be of a rather small size, suitable for an outboard motor or small inboard engine, some with sail and some without. In the other design, Mr. Atkin will alternate between cruisers, runabouts, auxiliaries, sailing craft and race boats. A great deal of attention in the future will be given to sail, especially the auxiliary type.

We feel that our readers will welcome Mr. Atkin to our already large list of famous contributors to the columns of MoToR BOATING. We should be very glad to receive your suggestions for the type and size of boats which you would like to have Mr. Atkin design.

(Continued from page 68)

New Outboard Catalog

The Johnson Motor Company, South Bend, Ind., will be glad to send any readers of MoToR Boating, a copy of their new 1924 catalog folder. This booklet is full of interesting photographs reproduced in color, the cover pages being reproduced by the four-color process. This new catalog has met with a hearty reception wherever it has been seen.

Boats for the Royal Mounted

In carrying on the effective work of the Royal Canadian Mounted Police in some of the wild portions of the Canadian Northwest in which they must operate, they find it necessary to resort to the water frequently. They have just secured two new boats from the Alberta Motor Boat Company, Ltd., of Edmonton, which are 25-feet long, and equipped with the twelve horsepower, four cylinder Universal engine. These boats will be used on Lake Athabasca and the McKenzie River for patrol purposes. They are equipped with a standing top for shelter and drop curtains and a windshield help to keep the crew dry.

Sea Sled Company Active

The heavy demand for the products of the Sea Sled Company at West Mystic, Conn., has made it necessary to increase the working force to a double shift, and it is contemplated that three shifts may be necessary in order to cope with the volume of business on hand and in sight. In addition to the standardized 22 and 25-foot stock Sea Sled runabouts, and the standard 11 and 13-foot dinghies, which are under construction, they are building Sea Sleds of special types for many prominent yachtsmen. These include fast 30-foot runabouts with two six cylinder Hall-Scott engines, a fast 35-foot cruiser with two GRS Sterlings, and many others. The dinghies have proved so popular that they have been put into quantity production and stocks of them are carried at distributors throughout the United States.

American Bosch Detroit Branch Moves

A new building for the Detroit branch of the American Bosch Magneto Corporation, Springfield, has just been completed, in order that it may be better equipped to function as a wholesale distributing center, and to serve as a model sales and service station. The new building, located at 89 Hancock Avenue, West, was designed especially to serve the needs of the Detroit territory of the Bosch Corporation. The expansion was made necessary by the increased service requirements resulting from the greatly increased use of Bosch units, and by the wider marketing activities of the corporation. The building is modern in every respect, and equipped with the most complete service and office equipment.

SMOOTH

Smooth as silk,—soft as velvet—the steady purr of the Niagara Special teaches you what real engine confidence means. It starts easily, runs evenly, accelerates rapidly or slows down to trolling speed, responding instantly to every touch of the throttle.

You expect such performance from a high priced, high powered engine. But when you find the same qualities in a 9-15 H. P. engine suitable for smaller boats, your surprise is only equalled by your admiration.

It is because Niagara Special is a four-cylinder four-cycle engine, embodying all the best features of up to date marine design. It isn't a redesigned automobile motor, or an assembly of automobile motor parts. You will recognize the typically marine design in many features.

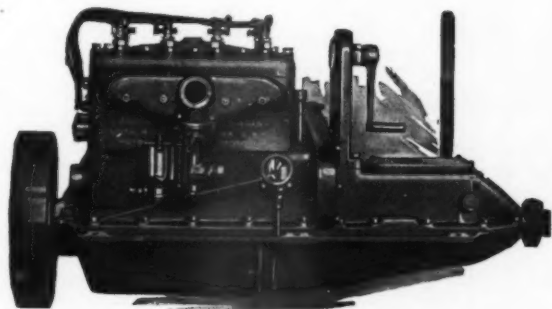
In medium duty service at 600 to 1100 R. P. M., Niagara Special develops 7 to 12 H. P. In high speed service it develops up to 15 H. P. at 1800 R. P. M. This covers the power requirements of runabouts, small cruisers and commercial boats.

"The Power of Niagara"

Write today for catalog and prices.

NIAGARA MOTORS CORP.

Box 300, Dunkirk, N. Y.



Bore $2\frac{5}{8}$ ", Stroke 4", Hot-spot manifold, Pressure lubrication, Detachable cylinder head, Built-in rear starter, Bronze water pump, Enclosed Joes Reverse Gear.

Other Niagara Engines from 12 H.P. to 120 H.P.

V
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SPEED GUARANTEED

1 to 3 miles per hour faster

In B & B Propellers lie the balance in power of your motor boat engine. Its careful design and unexcelled workmanship make it a wheel that cannot be surpassed. The secret of the increased speed and efficiency of B & B Propellers lies in their design—the outward edge is producing a forward thrust at all times with a minimum of slipping.

Let us have your propeller requirements—we can give you immediate delivery.

We also make a specialty of propeller repairing.

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(all branches)

BRYANT & BERRY PROPELLER CO.
1202 Lillibridge St., Detroit, Mich.



Erico Universal Shaft Log

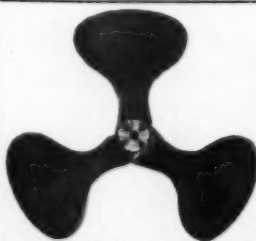
100 Per Cent True Alignment

Not only the angle, but the point of bearing is readily adjustable. Specified and used by leading designers and builders.

Mfgs. of Erico Electric Bilge Pumps, Electric Running Lights, Searchlights, Erico Spark, Throttle and Clutch Controls, Ventilators, Steering Wheels.

Hubbard H. Erickson & Co.

3045 N. Western Ave., Chicago



The "ROYAL SUPER" Propeller

PATENTED

EVERY REVOLUTION of this propeller saves money and gives more speed.

The full power of the engine is transformed into MORE DIRECT THRUST ASTERN.

No power is wasted by SIDE thrust near the hub. The Outer Driving Blade has an advantage somewhat similar to that which a long car has over a short car. This propeller is scientifically designed to use every ounce of engine power. It is made in pitch ratios to suit all types of boats.

Our list of satisfied users is steadily growing. LET YOUR ENGINE TWIRL THE POWERFUL DRIVING "ROYAL SUPER"

If you wish increased efficiency send for our catalogue which will be cheerfully sent on request.

R. C. McKENNEY & CO., Limited
88 City Line, West St. John, N. B., Canada

Gullible Travelers

(Continued from page 27)

this same westerly had been blowing down the Straits without cessation for nearly a month, but that, if we would run a few hours in the very early morning, against an incoming tide, we would have much smoother water. Accordingly, we ran about four hours next morning to Port Neville, where we were able to pick up some fresh bread from a logging camp cookhouse. While lying at anchor there, we suddenly heard a roar, a very peculiar one, too. Joe looked out a port and yelled, "An aeroplane is going to run over us." We all jumped to the cockpit and decks and there, just alighting in the water about a hundred yards away, was one of the largest planes I have ever seen. We found afterwards that it was there to bring some officials of the various lumber camps on tours of inspection, having come that morning from Vancouver, 200 miles away. It carried two 400-h.p. Liberty motors and had a carrying capacity in passengers and freight of 4,500 pounds.

Next morning early, we proceeded for Alert Bay. The whitest water ever seen by anyone on board was encountered off Helmcken Island and the mouth of Salmon River. Here the tide runs from 3 to 6 knots per hour and, with an opposing wind, the rips off the flat that extends out from Salmon River are simply immense.

Having damaged a propeller by fouling some drift in the Straits in rough water, we beached the ship at Alert Bay and straightened the wheel, going on the beach at 10 A. M. and off again at 5 that afternoon, all fixed and ready again. Alert Bay is a fine anchorage and shelters a good looking village composed mostly of sawmills, Indians and totem poles.

Our next objective was Port Alexander, a great harbor for cruising parties, waiting for favorable conditions to cross Queen Charlotte Sound. This Sound is the greatest stretch of open water on the route, being about 40 miles across and fairly shallow as oceans go, which makes it advisable for the cruiser to avoid it in a blow, especially a westerly, which in the event of accident would throw a boat on the barren rocks to the eastward.

Arriving at Scarlet Point in the morning we saw the Sound as smooth as it ever gets. Just the long greasy swell that is always found there in calm weather. It looked so favorable that we decided to cross, in spite of the fog banks to seaward, denoting a possible wind later. Just after turning Pine Island Light an hour later, a squall struck us that developed into a good steady wind of about 30-mile speed. With seas dead ahead, we rode like a gull for two hours, then turned for Harold Point on the last 12-mile course, taking the big seas on the stern quarter. They were so big and long, however, that, far from being uncomfortable for us, it was exhilarating in the extreme; the slow rise and fall, just like an immense roller coaster—the great speed when the downward rush was in progress, the slowing up on the climb, only to follow with another race on the other side.

This was the first time three of the crew had ever seen the Pacific. I sneaked a look at the Skipper's log and found:

"Queen Charlotte looked good to us, so we embraced the queen. Breeze hit us at Pine Island. It was rough." And, to myself, I added, yes, it was all of that.

John had a date with his bunk, evidently not subject to cancellation. When asked why he didn't get up, he said, "I haven't been getting enough sleep lately."

We all noticed that as soon as we were protected by Harold Point, John was almost at once on the bridge with a remark that he didn't think it looked rough.

Safety Cove, where we anchored, is perfect in protection, appearance, bottom and location, as it affords a quiet resting place if the trip across the sound has been rough; also when southbound it is so close to the open water that anchored there one can be on the way across within an hour after any storm has subsided.

The next morning Safety Cove was left behind. Up Fitz-hugh Sound, which was like the old mill pond, we proceeded in the first clear air we had seen for weeks. All forest fires were behind us. At Bella Bella, we stopped to change crank case oil, then proceeded, expecting to cross Millbank Sound, another stretch of open ocean, though not nearly as long as Queen Charlotte Sound. Although a perfect calm had existed at Bella Bella, yet within 45 minutes, at the opening into Millbank, we found a perfect gale. Anchorage was at once sought and found in Ormidale Harbor, where the night was spent in comfort. Millbank was most reasonable next day, so we made a fine run on it, beginning very early in the morning. Ivory Island light house has a wonderful setting on rocks that are almost perfectly white, and the red and green of the buildings and trees makes a most striking sight. Cruising up Tolmie Channel on the other side of Millbank, was delightful. A perfectly clear day, wonderful air, warm sunshine, favorable tide and all other conditions ideal. Passing Swanson Bay, a paper

(Continued on page 130)

Accurate, quick-seating and long-lived, **QUALITY** Piston Rings are everywhere proving their claim to supremacy in the marine engine field.

More and more builders of marine motors are specifying **QUALITY** Piston Rings for original installation.

And more and more users are learning the advantages of employing **QUALITY** Piston Rings for replacement.

That is why we are shipping "Over two million a month."

The Piston
RING COMPANY
Muskegon, Michigan

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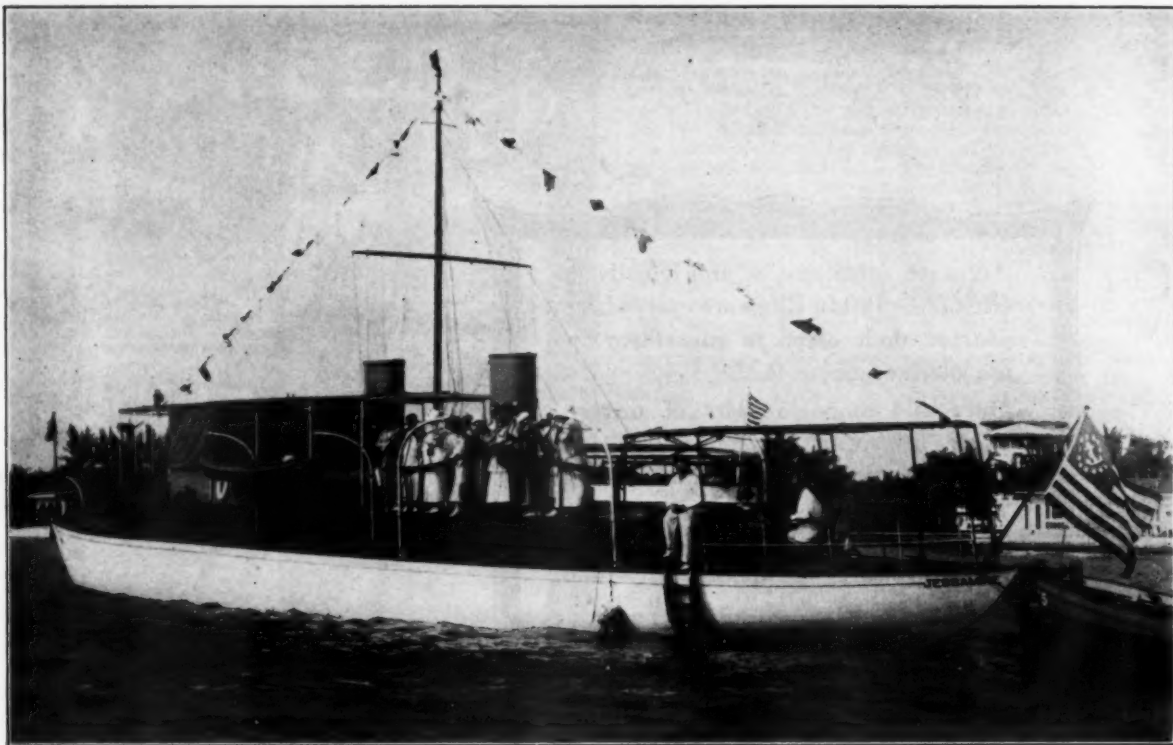


Photo M. Rosenfeld, N. Y.

How "Jessamine" Won Her Wintons

There was considerable discussion aboard the ninety-three foot cruiser "Jessamine" when Mr. F. W. Warner of Detroit purchased her. He decided the old engines were not as good as the hull, and he wanted new engines that were—with the job of finding them up to the officers.

The Chief Engineer who knew engines wanted Wintons—without wasting time looking at other makes. The Captain who could "shoot the sun" better than he could a grease gun wanted to be shown.

The outcome of the discussion was that last November "Jessamine" purred her way past the Statue of Liberty bound for the south with two new Model W 6 Winton Gasoline Engines

developing 80 to 100 H. P. at 425 to 450 R. P. M.

Mr. Warner wanted noiseless engines—now the Captain says you can talk in a whisper when the Wintons run. Mr. Warner wanted a clean power plant—now the chief engineer defies any lady to soil her handkerchief in his engine room. Mr. Warner wanted powerful engines—now "Jessamine's" speed of 12.5 M. P. H. is not affected by head winds. All in all, "Jessamine" now has engines as good as her hull.

This installation for "Jessamine" is an example of the way experienced yachtsmen are turning more and more to the reliability and exceptional performance of Winton power plants.

WINTON ENGINE WORKS, Cleveland, Ohio, U. S. A.

New York: A. G. Griese Inc., 30 Church St.
Los Angeles: F. G. Bryant, 201 F. W. Braun Bldg.
Boston: Walter H. Moreton Corp., 780 Commonwealth Ave.

New Orleans, La.: A. Baldwin Company.
Seattle: H. W. Starrett, Sunset Engine Company.
Washington: R. L. Fryer, 430 Transportation Bldg.

Winton

OIL DIESEL TYPE ENGINES

Advertising Index will be found on page 138

BOSCH



As Sure as the Tides

Where sureness and absolute dependability are of the first importance, you will invariably find Bosch High Tension Magneto Ignition. The Bosch life-giving stream of fire will add the same stimulus, economy and worthiness to your gas engine that it has to more than 4,000,000. Bosch Magneto Ignition is conveniently available for your automobile, truck, tractor, motor boat or stationary engine. Insist on Bosch on every automotive product you purchase. The nearest Bosch Service Statiton will install it in a few hours on your present engine.

Be Satisfied

Specify Bosch

Over 2,500 Official Bosch Representatives

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AMERICA'S SUPREME IGNITION SYSTEM

Motor Trucks, Tractors, Airplanes, Motor Cars, Motor Boats, Motorcycles,
Gas Engines

Trade



Mark

Smith's Marine White Enamel



For generations this enamel has been used on the finest yachts and power boats whose captains and owners insist on an enamel that will not turn yellow even in Southern waters.

YACHT BLACK GLOSS—Extremely hard and durable and with the least tendency to mar or show scratches. With either of these enamels above the water line and our **YACHT BOTTOM GREEN** on the bottom, a distinctive hull finish of the greatest beauty and durability may be obtained. For the deck our **YACHT DECK BUFF** and for all varnished work **THE CUP DEFENDER VARNISHES**.

EDWARD SMITH & CO.

West Ave., 6th & 7th Sts., Long Island City, N.Y.

MARINE HARDWARE AND SUPPLIES

Our Catalogue will help you select the right equipment for your boat. Copy sent on request.

PROMPT DELIVERY.

RIGHT PRICES.

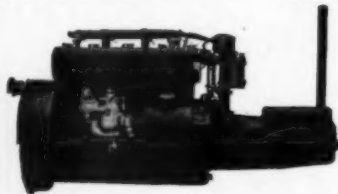
W. & J. TIEBOUT

Established 1853

Incorporated 1892

118 CHAMBERS STREET
New York City

ROBERTS MOTORS



Four cylinder, 4-cycle, 16 H.P.

Price of complete power plant, including meter, ignition outfit, built in reverse gear, polished bronze salt water propeller outfit, and starting and lighting outfit (including ammeter, starting switch, and storage battery), \$435.00.

Write for Catalog and further information.

ROBERTS MOTORS 200 Arthur St., Sandusky, Ohio

Price of motor
complete,
including
ignition outfit
\$250

Advertising Index will be found on page 158

Gullible Travelers

(Continued from page 126)

and sawmill town, we anchored at Butedale, a Salmon cannery, where there is found one of the most marvelous waterfalls on the whole Coast.

From a height of about 600 feet this water tumbles over monstrous boulders, dashing itself to spray and foam, time after time. We climbed away up on top, where there is a lake over two miles long, which, we were told, is full of large trout.

Leaving Butedale late in the afternoon, we cruised up Fraser Reach across Wright Sound and to Tove Inlet in Grenville Channel. This is another cannery harbor affording perfect protection from all winds, but with anchoring conditions that require caution, as the bottom found at 16 fathoms one instant was found to be 2 fathoms the next. To catch a favorable tide next morning, we slept late and rested until noon, meanwhile watching Skipper christen his new Springfield sporting model by killing an immense bald eagle, which he at once proceeded to photograph, with Joe for background.

Graham Reach, Fraser Reach and Grenville Channel are some of the real beauties of this cruise. They are indescribable, except that a Puget Sounder might begin to understand if told that they were Hood's Canal to the nth degree. Much narrower, higher mountains right at water's edge, hundreds of waterfalls coming down all the way from the peaks of these hills, nooks and crannies and inlets by the score, each one of which invites you and dares you to explore and find its charms.

Waterfalls along this route are transcendently beautiful. Here you see one starting under a snow bank thousands of feet up, coming over a bald rock that looks like a pebble, and yet which is no doubt a mountain in itself. The stream is launched clear of everything into the air, falls sheer hundreds of feet, apparently loitering, so slowly does it seem to move, yet when it does strike it is dashed into mist. Just beyond is a fall starting just as high up, coming out what looks like a little crease in the mountain top, and which crease is probably a valley that would take a day to work across. This stream comes rolling from ledge to ledge all the way down, looking like a fairy ribbon being wound upon the spool of the water's edge. Indescribable? Yes, just as has been said about so many of Nature's wonders. Let me advise you, however, without delay, whatever else you do before you pass on, go through this route to Alaska in early summer. Some time before you die, hock the flivver, sell the cow, rob the baby's bank or steal your bootlegger's diamond ring; do whatever seems best to your sensitive soul in the way of acquiring the necessary means, but DON'T die until you have made this cruise. God made this inside passage to Alaska in one of his moments of greatest love for the human race.

Late in the afternoon of the 24th we turned off the course at Kennedy Island, into a harbor where is a deserted town. There everything that is necessary to a town may be seen, except that one prime requisite, LIFE. Good dock, stores, school, hotel, residences, cab'ns and bridges. Beside the appearance of this town, a cemetery would seem like a cabaret in full blast at, you know, what time. I shall some day find out what started this town at Spiller River, and also what stopped it. Fishermen whom I have asked have merely shaken their heads.

We tied to the dock, and took a line from the boat's stern to a pile which had been driven just the right distance away, so the rise and fall of the tide would not tighten our lines too much, then went ashore for the first time in many days. Wandering up the deserted dilapidated road we ran across many deer tracks, threw rocks at a grouse until the improvement in our aim convinced us we might put one over the pan, whereupon that grouse went away from there. A little farther on, a spike buck burst through the brush, stopped in the road for an instant to inspect us, and then leisurely went on his way. After enjoying a real walk, we returned towards the boat, thinking many thoughts of food.

While dinner was in preparation, Joe, who is just naturally sympathetic with dears and deer, brooded over the lonesome life this buck was leading, until it got on his nerves to such an extent that he went back shore. In a very short time he returned, saying he had had a heart-to-heart talk with the fellow, who had asked Joe to take him along in our party. IN our party is correct. Now Joe is an honest, straightforward citizen, who almost never passes the buck, and he did not pass this one, either. He brought him into camp. I chuckled next afternoon on reading the entry Cap had made in the interesting side of the log: "We not only licked our chops after breakfast but we licked a whole battalion of them for breakfast."

Next day we left this woe-begone-looking ex-settlement, and it was still dark when we were back on the steamer course and heading across Chatham Sound. This water is about

(Continued on page 132)

Throw Away Your Reverse Gear and Get a

GORDON

Reversible and Feathering Propeller

NEARLY 20 years on the market and still going strong. The best proof of the efficiency, durability and practical value of Gordon Reversible Propellers is found in the experience of boatmen who have been using them for five to fifteen years.

From Put-In-Bay, Ohio (Purchased Feb. 1911).—Your Gordon Propeller and Blade Shift are O. K. The Gordon Outfit is still in commission. It is the only outfit for trolling. You can put your boat to any speed you want without bothering with the engine.

Cleveland, Ohio.—The Gordon Adjustable Blade propeller which I installed in my Toppan dory last year has been very satisfactory, not only as to speed but much more convenient for handling the boat than the old type of reverse gear. Your propeller does all you claim for it and is satisfactory in every way.

From Germantown, Philadelphia.—Have used the Gordon Reversible Propeller for the last eleven seasons. That speaks for itself.

From West Palm Beach, Fla.—I used your Gordon Propeller for six seasons in connection with a 15 H.P. engine on a 35 ft. sloop. The real value to me of your equipment was in the feathering feature when boat was under canvas and the ability to change pitch of wheel when using canvas and power together.

Think of the saving in weight and room in the boat. Think of the simplicity—complete control, fast, slow, forward or reverse, with one lever without touching your engine throttle. You can stand still without racing the engine, shift instantly from full forward to reverse without strain on engine, gear, clutch, shaft or wheel. It is a perfect brake for stopping quickly. You can troll as slow as you please, or feather when under sail with no drag from the propeller. No clutch to slip, no small gears or bearings to wear and grow noisy.

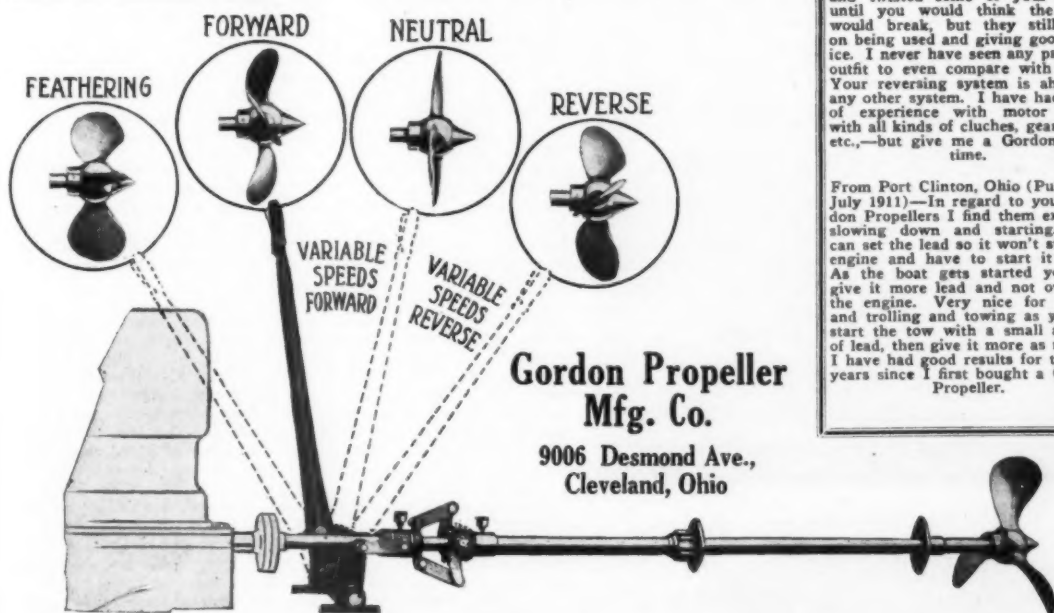
Try a Gordon Propeller and you'll never want to use another solid wheel or troublesome reverse gear. Made in all sizes for runabouts, cruisers, auxiliaries and work boats. Prompt delivery.

**Don't fail to get prices and full information
Send coupon today with details of your boat**

From Kennedy, Wisc.—Yes, just about thirteen years ago you sold me your first one, and if I remember right I afterwards bought two Gordon reversible propeller outfits. My outfit I installed in a 30 ft. day cruiser with a 45 H.P. Beaver Motor. I used it up to the time I sold it five years ago. For sixteen years I used and installed every make of propeller on the market and at last I tried the Gordon and was satisfied. While using my boat I made two trips down the Illinois River via Lake Michigan—then down the canal. In making this trip I was obliged to lock about twelve or thirteen times. In making a lock it is always safer to have your motor running and a propeller that will respond instantly; that is where the Gordon stands in a class by itself.

From Cazenovia, N. Y.—I installed three of your Gordon Outfits in 1911—two of them are still working in perfect condition—while the other one was good as new when the boat was junked. During all these years I bought a few blades, it being almost impossible to damage them so but what they can be straightened out. I have pounded and twisted some of your blades until you would think the metal would break, but they still insist on being used and giving good service. I never have seen any propeller outfit to even compare with yours. Your reversing system is ahead of any other system. I have had years of experience with motor boats, with all kinds of clutches, gear boxes etc.,—but give me a Gordon every time.

From Port Clinton, Ohio (Purchased July 1911).—In regard to your Gordon Propellers I find them excellent slowing down and starting. You can set the lead so it won't stall the engine and have to start it again. As the boat gets started you can give it more lead and not overload the engine. Very nice for fishing and trolling and towing as you can start the tow with a small amount of lead, then give it more as needed. I have had good results for thirteen years since I first bought a Gordon Propeller.



**Gordon Propeller
Mfg. Co.**

9006 Desmond Ave.,
Cleveland, Ohio

Gordon Propeller Mfg. Co., 9006 Desmond Avenue, Cleveland, Ohio.

Gentlemen: Without obligation please send prices and further particulars of your Gordon Propeller for specifications below, which are exact for my boat—

Overall Size..... Type..... Speed..... Engine Power..... Size Present Propeller

Name Street Shipping Point..... City..... State

Kind of Boat, X Check in Square Tug ☐ Schooner ☐ Speed Boat ☐ Cruiser ☐ Pleasure Boat ☐ Fishing Boat ☐

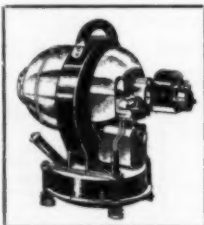
Present Propeller R. OR L. Hand Wheel..... (All wheels three blades unless otherwise requested).

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Gullible Travelers

(Continued from page 130)

30 miles long by half the distance wide, and was literally covered with gill netters who come out from Prince Rupert every evening in the salmon season, to fish all night. They are towed out in long lines, sometimes two lines of boats to one big tugboat, and each morning, the tugs come again and tow them back to Rupert with their catch. It was a fearful sight to a landlubber. All these hundreds of lights on the boats and on the ends of the nets. How could Skipper tell which were beacon lights and how could we keep the nets out of his propellers and stay on the compass course. "Easy," he said. Perhaps.

Before we were across we saw as many as 20 boats strung on behind a single tug, en route for home.

Dixons Entrance was smooth and clear. Just the smallest ground swell. Leaving the protection of Whitley Point we were behind protection again on the other side and out of even the little rollers. In the evening we again crossed the International Boundary Line, this time into Alaskan waters. There was really quite a kick in just realizing we were back under the Stars and Stripes again after so many days in a foreign country. Ketchikan was reached and tanks refilled at Standard Oil Dock. From there we went to the Forest Rangers' floats up on the water front, and these boys being real, regular fellows, told us to just come on in and tie up, although, ordinarily, nothing but their own boats land there.

Through the courtesy of Mr. Woodruff, one of the Customs men, we were quickly cleared and our Alaskan cruising license secured. While the crew indulged in ice cream, Skipper went around to his agent and sold a couple of motors. Grub lockers were replenished, supper eaten and then everybody went to the movies.

Ketchikan, the largest town in Alaska, is a real town. It has department stores that would do credit to a town of 100,000; fine buildings of permanent construction, electric light and power, of course, as that is the one thing Alaska ain't got nothin' else but—with apologies to Mr. Cohan. We saw at least two good hotels, and, apparently, a world of business being transacted in many lines.

From Ketchikan to Wrangell, the trip was uneventful, but full of the same charm of this marvelous country. Fishing boats, trap tenders, tugs, steamers, etc., make a busy scene around Ketchikan. A Coast Survey Boat crew was putting up a new beacon on a point of land, and stopped their work to watch us pass, no doubt wondering how long it had taken that little craft to come from Seattle, 800 miles away.

At Wrangell, Skipper played with the Radio outfit for two days in an effort to find out if the Seattle broadcasts could be received there satisfactorily. He had us erect an antenna and he played and worked and quit disgusted. The low-powered stations in use in Seattle at that time could not make themselves heard with any satisfaction. And now, after three days wasted wrangling with Radio in Wrangell, we were off on the last run for Fair Island Fox Ranch, reaching that dot on the chart at 11:30 A. M. on July 29th. Much confab ensued between Skipper and his partner, Gregg. Talks and plans, more plans and lots more talk, until late or early, as you like it.

In order to utilize so much brains and brawn, a trip to Petersburg was necessary on the 31st. Accordingly, the foxes were abandoned to the tender mercies of the eagles, poachers and wolves, the whole kaboodle of us going to town: The Greggs, (Mr., Mrs. and Miss,) and also the full complement of officers and men of the *Lady Luck*. On the way through Wrangell Narrows, two deer were seen on the beach ahead. Skip took two shots from the bow of the moving boat and at the second one, Gregg remarked: "He's your meat." Brief business of Skipper and Joe landing, dressing and conveying the meat to the cockpit.

The next several days were full of work and interest. Lumber was beach-combed, buildings erected, trees felled and sawed into wood and logs with the power drag-saw that is part of the ranch equipment. A floating walk was built from the shore to the fish-dressing float, hair seal were shot for fox feed, fishing was done for the same purpose, and a cruise was made to locate a run of dog salmon. We dragged for shrimp, eating the largest ones and feeding the others to the foxes. There are five distinct varieties of shrimp within a mile of the island, the larger ones being practically as large as a medium-sized lobster.

Evenings we chechakos were regaled with real Alaskan stories, as for instance, the Giant Squid as large as a steamer, the brown bear with such vitality that after being killed and skinned, he got up and ran away bellowing over the loss of his pelt, and other stories. John's eyes protruded so far that they had to be forcibly returned to their sockets so he could get some sleep.

(Continued on page 134)



35-foot Sea Sled Cruiser running at 45 m. p. h.

Sea Sled Again Breaks All Speed and Efficiency Records

**7 Ton Cabin Cruiser Makes 46.57 m. p. h.
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A Real Express Cruiser for Rough Water

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A large stateroom with two wide berths and 6' 3" headroom.

Separate toilet room.

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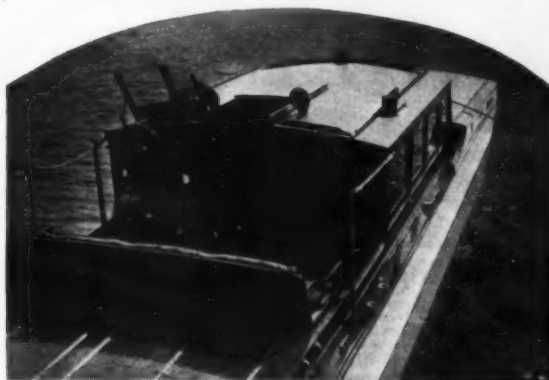
Cruising radius better than 400 miles.

Guaranteed speed was 31 miles with full fuel load at 200 r. p. m., below maximum revolutions.

Actual speed was 36.30 miles at more than full load (18000 pounds) at 300 r. p. m. below maximum revolutions.

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Actual maximum speed with 100 gals. gasoline and crew of four was 46.57 m. p. h.



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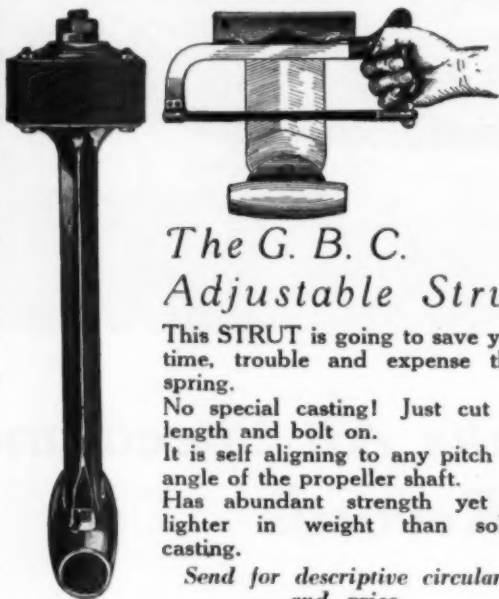
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The G. B. C. Adjustable Strut

This STRUT is going to save you time, trouble and expense this spring.

No special casting! Just cut to length and bolt on.

It is self aligning to any pitch or angle of the propeller shaft.

Has abundant strength yet is lighter in weight than solid casting.

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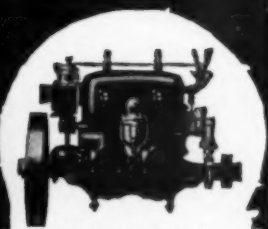
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TWO CYCLE



Model U. 6-8 H. P.

Cut the High Cost of Boating

Get a famous Gray 2-cycle motor. Like the high cost of living, or the "cost of high living," boating expense is just what you make it. For instance, you can pay 50% to 100% more for an engine of the same horsepower without getting any greater reliability, any longer service, smoother operation, easier starting or better fuel economy than you get in the latest Gray Two-Cycles.

Gray 2-cycle is the most popular marine motor ever built. Literally thousands sold. Over 12,000 of the 2-cylinder "U" shown above in service today. And still "selling like hot cakes."

Better than Ever

Thirty years experience behind these motors. Constant improvement in design, better materials, better production methods, insure better service, smoother running, easier starting and longer life. Absolutely non-backfiring, simple and troubleproof as any machine can be.

Write today for the Gray 2-Cycle Bulletin and prices. Quick deliveries on early orders.

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More Power per Dollar

No wonder Gray 2-cycles give you more engine power per dollar of cost. Only three moving parts,—piston, connecting rod and crankshaft,—so we can put the finest materials and workmanship into them without running up the cost. In fact they couldn't be better if we charged twice the price.

You have your choice of three models. Single cylinder, 3-4 H. P., or 5½-7 H. P. Double cylinder, 6-8 H. P. Complete satisfaction guaranteed.

Gullible Travelers

(Continued from page 132)

Gregg's houseboat, which you will see is beached high and dry for living quarters for his family, came in for its share of the discussion. It has all the grace and shape of a block of wood. Gregg told us of his arrival at Petersburg for the first time. Two urchins were standing on the dock watching it come alongside, when one turned and shouted to one of his fellows up the street, "Hey, Bill, come see the box car that jumped overboard."

With something doing every moment, the days flew by rapidly. As soon as the fresh-meat supply was low, Joe or Cap would take a day off and replenish it. Salmon were netted by the hundreds, dressed, smoked and dried, cutthroat trout and rainbows were caught in such size and numbers that the bunch were fed up on both catching and eating them. Young grouse were bagged on occasion and just let me say that the two-thirds grown grouse properly fried in butter, has it all over spring chicken and then back again. Ice cream was the main piece at many suppers. Small bergs from La Conte Glacier, float into the narrows with favorable wind and tide, and it is an easy matter to go alongside one of them and secure ice supply for a day, week or month, as the need demands.

Fresh fish of innumerable kinds were caught for fox feed: cod, flounder, skates, halibut, shrimp and even the hated dog fish. Oh, the lavish hand that Nature has used in giving to Alaska! The true outdoors man drinks of the wonder of it all, until he has an Alaskan delirium tremens from which he never will and never wants to recover.

A trip for fresh meat, participated in by Joe and Cap, netted one small spike buck, which Cap caught asleep or something. Dressing the deer on the spot Cap carried it out, but both he and Joe, who had separated to look for the tracks of "big 'uns" found the tracks, and that evening Joe went back again to the same vicinity alone. Just before dark, he came rowing across, putting lots of lightning in his strokes, and informed us that he had killed the daddy of them all. Immediately wagers were laid as to its weight, dressed. After supper four of us went over in the small power boat, left Cap with the boat to keep it off the beach as the tide went out, and three of us hiked into the woods. Joe took us almost straight to the spot where his big buck lay. It was long after dark when we saw the light from the beach fire that Cap had started, and got out with this beauty. He was a delight to the eye and to the taste. Man, Oh, man! What flavor and tenderness! The taste was like the finest cross between beef and mutton. Fat an inch thick on the rump, and the venison snow-white after skinning. Part of this fellow was canned in glass, and even now, some jars are reposing on the storeroom shelf waiting for special occasions.

A day's hunting along the mouth of Castle River netted John two big eagles, a bald-headed one and a larger black. He insisted on having his picture taken with one of them as they were his first big game. His estimation of himself promptly rose a few feet. The same day, Skipper sneaked across the flats about a mile to get in range of a flock of fourteen geese, fell into the water to his waist, en route, crawled into shotgun range, stood up and as the geese rose with a roar and much honking with the five shots of his repeater he accounted for just half of the flock. He staggered back to the boat with seven big geese and a shotgun, his boots containing, in addition to their regular complement of feet, several quarts of water, and his facial expression was wonderful to behold. That afternoon he took three shots at another goose flying high overhead, and with the third shot from his Springfield rifle, the big bird folded up and came down. He admitted that it might have been an accident. These eight geese made one roast, one fry and the remaining six birds with all bones removed, just solid meat, canned thirteen quarts, packed solid in glass jars.

All told, on the trip, nine deer were brought in and consumed fresh or canned. This meat being fat and tender was of the finest flavor imaginable. Unnumbered young grouse, ptarmigan, trout, salmon, etc., were a part of the sport and menu.

And how Tempus did Fugit. Like a lonesome Teal duck flying with a 120-mile gale. The weather was mighty good to us, too, as we recorded twenty-five perfect days in August.

Knockers will tell you that it rains in S. E. Alaska 366 days in the year and snows the other seven. An experience of several summers in that vicinity has proved to Skipper, however, that Alaskan Summers are more beautiful than those afforded by the average climate elsewhere.

A complete book of large size could be written about the succession of intensely interesting days around the fox ranch, hunting trips, fishing, climbing mountains, shrimping feeding foxes etc., but I never wrote a book, and consider this no time to begin. Let's, therefore, start on the return trip.

(Continued on page 142)

18 YEARS OF GOOD REVERSE GEAR SERVICE

For Long Service at Lowest Cost Get a

GIES

(Pronounced "GEESE")

REVERSE GEAR



BUY a Gies Reverse Gear this year and it will still be working for you in 1942. You may not keep your present boat that long but if you sell it in the meantime you can tell the new owner he needn't worry about the reverse gear for many years to come.

The first Gies Gears were built in 1906—18 years ago. They were one of the first makes of marine reverse gears on the market. And they must have been pretty good gears as many of them are in service today. We still get orders for parts on gears made 15 to 18 years ago, showing that their owners have no idea of giving them up.

The Gies Gear of today is better than ever. It is built to outlast your engine, being properly designed and carefully made, with the best materials money can buy.

Notice in the illustration above that the Gies is built

on and surrounded by a solid frame that is as firm as your engine bed. This is most important because no amount of twisting or bending of the hull can put any strain on the gears or force the shafts out of alignment.

The shaft bearings at each end of the frame are die cast nickel bearings, easily replaced. A big grease cup lubricates each bearing.

The gears themselves are enclosed in an oiltight case and operate in a constant bath of oil. Ample adjustments are provided to keep the gear working smoothly and positively.

The Gies Gear could not be simpler in design or any easier to care for. With very little attention it can be kept properly lubricated and properly adjusted so that it will give you good service at the lowest possible cost for as long as you care to use it.

Gies Gear Prices Speak for Themselves. A First Class Gear at the Lowest Cost Consistent with Good Construction

Special No. 1,	1 1/4 H.P. per 100 R.P.M., Weight 48 lbs.	\$35.00
Model A,	2 1/2 H.P. per 100 R.P.M., Weight 60 lbs.	\$45.00
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Fully Guaranteed up to their Rated Capacity. Terms 25% cash with order, balance C. O. D.

While we advise you to order at once if you want your gear this spring, we will gladly send further details on request.

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Why they "put it up to old man Joe"



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DETROIT MICHIGAN

September 28, 1923

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New Haven
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Gentlemen: Attention of Mr. A. T. Mabstedt

This will acknowledge your favor of the 25th in regard to the performance of Packard Marine engines and particularly to the records recently established by the "Rainbow III".

All our Packard Sweepstakes and Gold Cup Model Marine Engines are equipped with Joes Special Speed Model gears. These gears as worked out for our engines represent a very clean-cut installation and are giving splendid results.

These engines went thru the Gold Cup and Sweepstakes races with a perfect score and as you know, Commodore Greening accomplished a wonderful result in his twenty-four hour run with "Rainbow III", which had already been thru the Gold Cup and Sweepstakes races.

I wish to congratulate you on the performance of your gear equipment as used in our engines.

Yours very truly

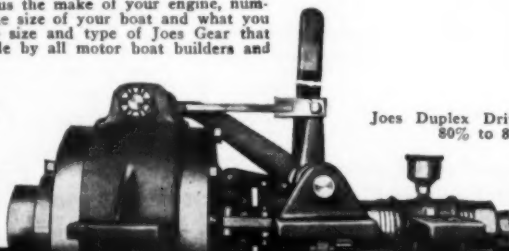
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Vice-President of Engineering
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If your engine is not already Joes equipped, it can be easily. Just call at the nearest Joes Distributor; or tell us the make of your engine, number of cylinders and bore and stroke, the size of your boat and what you use it for, and we will recommend the size and type of Joes Gear that will give you the best service. For sale by all motor boat builders and accessory dealers.

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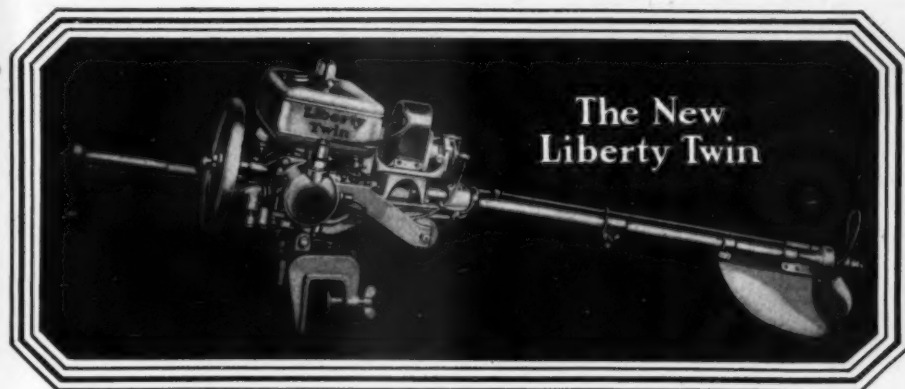
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The New Liberty Twin

Our Challenge
to other builders to
follow us through
weeds, shallows and
over sunken obstruc-
tions has never been
accepted and still
stands

Handle the Motor That Leading Dealers Sell

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They were not slow to recognize its outstanding selling features. They readily appreciated the correctness of the Liberty Direct Drive principle. Tested by thousands of users over a period of four years, it has proven its superiority over all vertical and so-called "tilting" motors. Drives any boat through thickest weeds, shallowest water and over hidden obstructions that would wreck any other motor. And note these additional advantages:

Has Bosch Magneto

Standard the world over on high-class motors. Mounted on a special rocking cradle, designed by Caille and Bosch engineers, it gives a uniformly hot spark at all speeds.

Zenith Carburetor

Specially designed for the Caille Liberty Twin. Operates automatically at all speeds without any adjustment whatever. No needle valves to fool with. Proper mixture of gas is always assured.

Motorcycle Control

Simply turning the grip on the steering handle adjusts the timing of the hot Bosch spark and controls the speed of the motor. Pressing button on end of steering handle stops motor. The easiest operated motor in the world.

Easiest Motor to Carry

The telescoping shaft can be quickly detached to facilitate carrying. Motor comes in chest having convenient handles. Can be shipped anywhere or carried on running board of car.

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Provides a motor to meet every purse and every fancy as regards types. But you'll find the Caille Liberty Twin will be your leader by a wide margin. Good territory is going fast. Hundreds of dealers are accepting the liberal Caille Agency proposition for 1924. Don't delay. Send for discounts and your territory rights now. Use the coupon.

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**Easiest Selling
Motor You
Ever Handled**



The Single Liberty
Same principle as the Twin
but having only one cyl-
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those wanting a high-grade
engine at a moderate
price.

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Have you previously sold
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The Middletown Yacht Club
FLAGSHIP "HARPOON"

March 26, 1924.

Motor Boating,
119 W. 40th Street,
New York City.

Gentlemen:

The writer, who has watched the ups and downs of motor boating for some twenty-five years, cannot understand the tendency on the part of some magazines, which are supposed to be published for the good of the sport, to accept advertising, for the sake of the few dollars involved, of various monstrosities which are totally unsuitable for the propulsion of boats.

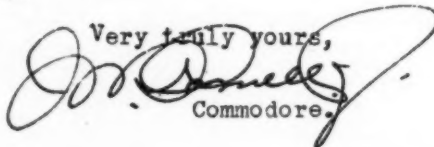
I am referring to the ridiculous conversions of various aviation, automobile and truck motors which are offered as marine engines and time and time again I have seen such engines enthusiastically installed by a new convert to the sport, who, after battling with his make-shift for the best part of a season, gives up the whole game in disgust and goes back to the next best thing he can find by joining the dust eating throngs on the highways, trying to get a little health and happiness out of his week-ends.

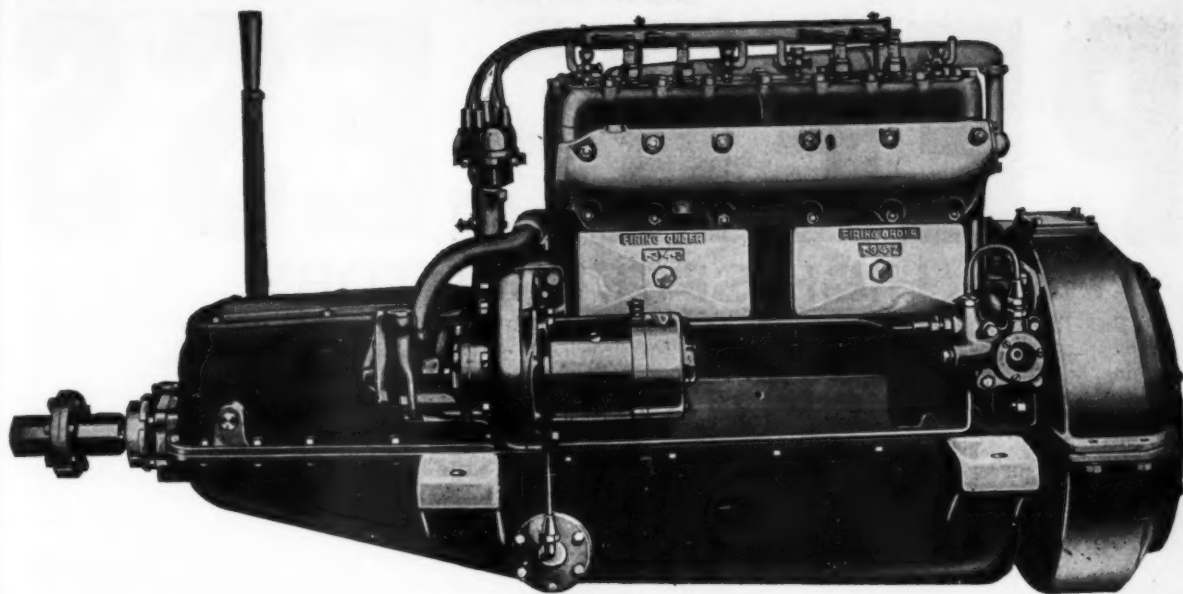
Motor boating or any other kind of boating is the safest, cleanest and healthiest sport available for any individual and particularly those who like the most of us have to be more or less indoors during the week and the recent tendency indicated above has seemed to me like a crime on the part of magazines supposed to be devoted to the good of the sport.

I think you appreciate there is nothing personal in this. In fact, I have been greatly pleased to note that Motor Boating seems to have somehow avoided the acceptance of the advertising of unsuitable power plants and has evidently refused to be a party to the dumping of excess material in this field.

M.S. Cornell, Jr./G

Very truly yours,


Commodore.



1924



20-35

Write for the Details of This Engine

THE best proof that the science of marine engine design is advancing is to compare the construction of this new ERD 20-35 with ANY engine of three to five years ago, and with MOST marine engines of today. Not that there is anything radical or freakish or extravagantly new about the ERD, but its design is so perfect in every detail that you will understand why we have succeeded in getting more power for its size and cylinder displacement than was ever developed by such an engine before.

For runabout or cruiser you'll find that this is a power plant which will stand up in medium speed or high speed service and give you years of dependable service at the lowest first cost, the lowest fuel cost and the lowest maintenance cost.

A Few Up-to-the-Minute Features of the New Erd

Long stroke motor, 3 3/4" x 5"

Massive, three-bearing, CHROME NICKEL STEEL crankshaft.

Largest bearings of any motor its size.

End play adjustment for crankshaft—the only Marine Motor so equipped.

Lubrication—full force feed system by internal gear pump through HOLLOW CAMSHAFT and drilled crankshaft to all bearings.

Main bearings, connecting rod bearings, and even camshaft bearings bronze back, nickel Babbitt lined type.

Main bearing studs, connecting rod bolts, even cylinder head studs, nickel steel, heat treated.

Extra large valves of nickel steel alloy.

Hollow valve tappets, easily removable without disturbing valves.

Bronze gear water pump with salt water fittings through-out.

Most cleverly designed hot-spot manifold.

PARAGON REVERSE GEAR, nickel steel shaft, running on double row annular and thrust ball bearings. Stuffing box.

All working parts completely enclosed. No oil leaks.

Not a single grease cup on the whole motor.

UNBELIEVABLE POWER! More than 22 1/2 h.p. at 1000 R.P.M. 35 h.p. at 1600 R.P.M.—42 1/2 h.p. at 2100 R.P.M.

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HIGH SPEED MOTORS

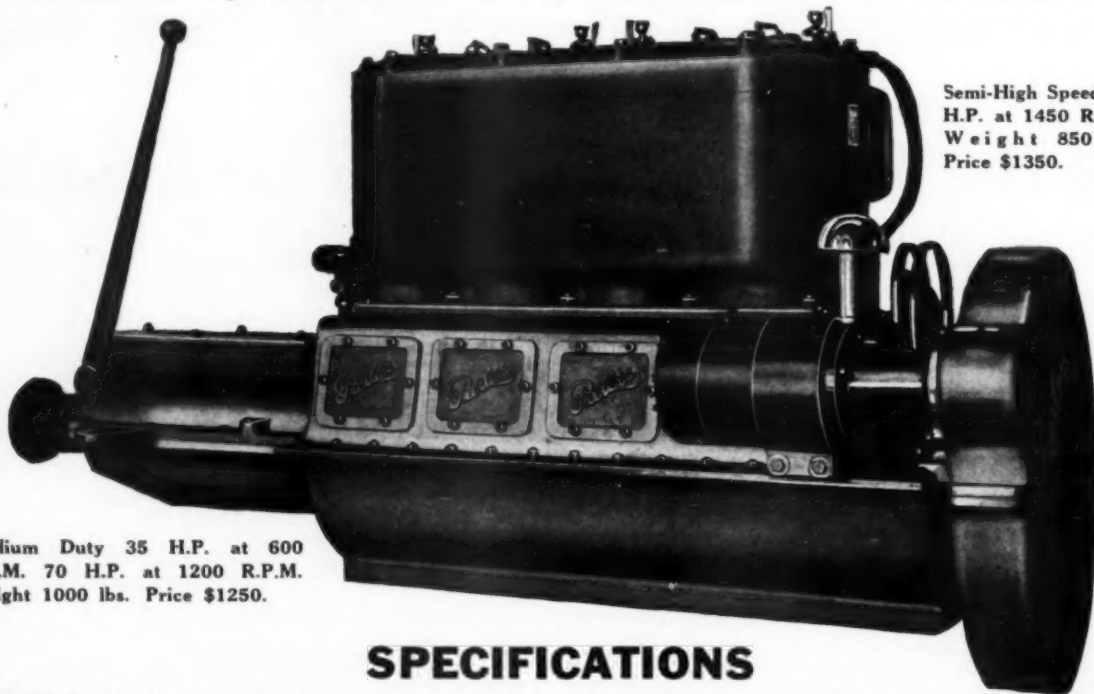
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MEDIUM DUTY MOTORS

The old reliable line of medium duty motors are too well known to need a further description here. They have been giving satisfactory and reliable service in all types of boats for a number of years. They can be had from stock in six sizes, ranging from 5 to 50 H.P.

A NEW MOTOR

The new 35-70 H.P. Peerless motor fills a long felt want in the marine motor field. This motor has sufficient bore and stroke to develop its rated power at engine speed, which is practical in actual boat service. It is absolutely modern in regard to design and equipment, very quiet in operation, flexible in speed control, economical in fuel consumption, and consumes practically no oil, on account of the oil tight base and very efficient full pressure lubricating system. The crank shaft and connecting rods are machined all over, reducing the reciprocating parts to a minimum weight, which results in a perfectly balanced motor, free from vibration at all speeds.



Semi-High Speed 70-H.P. at 1450 R.P.M.
Weight 850 lbs.
Price \$1350.

Medium Duty 35 H.P. at 600 R.P.M.
70 H.P. at 1200 R.P.M.
Weight 1000 lbs. Price \$1250.

SPECIFICATIONS

CYLINDERS. Cast four enbloc with detachable head, thoroughly water jacketed.

CRANK SHAFT. Six bearing crank shaft, nickel steel, machined all over and bored hollow for lubrication.

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Advertising Index will be found on page 158

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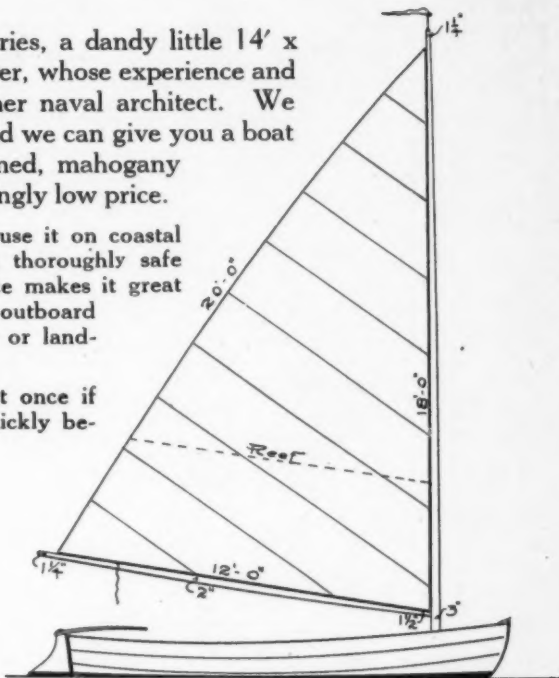
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Gullible Travelers

(Continued from page 134)

Late in the evening of September 2nd, we ran the 30 miles to Wrangell. Having gotten the Seattle Radio Station KFC from the fox island, Skipper wanted to try his luck with the waves again over the new antenna he had erected at Wrangell. No wireless waves were received, but that night at anchor in Wrangell Harbor, which is wide open to Sumner Strait, which is in turn wide open to the Pacific Ocean, we got sufficient waves to satisfy the most radical and rapid of Holy Rollers.

At Ketchikan the following afternoon we were extremely fortunate in getting cleared through Customs promptly on account of the unfailing courtesy of Mr. Woodruff aforementioned, getting our fuel and groceries aboard, and being on our way south again at 6:00 P. M. Hassler Harbor, where we spent the night, is an anchorage that looks like an oil painting by one of the Old Masters, being so protected that the mirror-like water reflects the white, black and brown rocks of the beach, the intense green of the forest, and every cloud or patch of clear sky.

Hassler Harbor to Spiller River was marked by an interesting case of a Canadian freighter off her course in the darkness of the early morning just when we were leaving Hassler Harbor. We could not tell for some time whether she was a school of lighthouses on a reef that we knew was there, or whether she was actually a ship on the reef. How she missed piling up is a mystery to us, so close in was she.

Our fresh supply of venison consisting of a bone, a rag of meat and a hunk of hair, it was deemed wise to see if there was another lonesome deer at Spiller River. There was.

On this cruise, every possible logical advantage of the tide was taken. The rapidity with which the tides run in these narrow channels makes this most advisable. On account of the distance to be traveled and the comparatively limited capacity of our fuel tanks, (not to be so tactless as to mention the saving on fuel, even though Skipper is known to be possessed of Scotch blood.) *Lady Luck* was run practically the whole distance on the starboard engine. This gave her a cruising speed, with this engine throttled considerably, of just eight knots average, which is a very satisfactory speed for this cruise.

Catching a favorable tide the next morning, we left Spiller River and ran 12 hours straight through to Swanson Bay, arriving at just an hour after dark. We nearly caught a peck of trouble in doing it, too, as just as darkness was dropping over us, with no anchorage whatever, closer than Swanson Bay, a fog suddenly formed and seemed to fall like lead straight from the mountaintops. It mercifully stopped about fifty feet above the water, however, and there it hung like the finest linen cloth. There was just sufficient light from somewhere, to see the beaches on each side, which was a mercy in those narrow, crooked channels, and everyone heaved the old sigh of relief when we heard on our right hand the roar of the big waterfall that we knew was only a few hundred yards from the lights of Swanson Bay.

An ambitious and unmerciful skipper made us roll out at 3:00 A. M. and haul anchor. An equally angelic one allowed us to go back to bed immediately. Afterwards, we heard—"It was raining hard cider and sinkers this morning, early, as you fellows know; the forward deck was glistening wet and the darkness intense. While I had the running lights burning I couldn't see the occasional drift log quick enough, so I switched off all the lights except the binnacle.

"After two hours' running, throttled down, during which time I must have pitched you out of your berths that time I threw the wheel hard over to avoid the big log, I saw what I had been looking for, for several minutes, a light dead ahead.

"I was due to pick up Boat Bluff Light, and was congratulating myself on my excellent seamanship and reckoning, when I noticed that there were two lights where there should have been but one. Two in line one above the other. After another minute or two I could see three lights, all white and the third playing tag with the two steady ones. I was just considering asking for a sanity commission when at last I saw a red and green eye on the sides of the two white lights and then the old think tank finally whispered 'BOAT.' Reaching up quickly I switched on all four running lights and almost before the filaments had begun to glow, that old freighter said 'BO-O-O-O-O-O-O-O.' I'll bet she had been wondering for a long time what sort of driftwood was in her course," said Cap, as he refilled his corncob.

Millbank Sound was having a blowout or a run on the bank or some kind of excitement, but we all voted to take two hours of rough stuff for the sake of fair tides, long miles of protected water on the other side and progress. The course on Millbank is three-legged; in any wind that blows, you must

take one leg bucking it full in the face, the second square in the trough and the third, on the stern quarter. I recommend Millbank as an ideal course (though comparatively inaccessible) for determining the seaworthiness of any small craft.

Right here let me say that forever hereafter, I want nothing but a V-bottom boat. The absolute freedom from roll in any sea we encountered and the stability of *Lady Luck* in waves of all directions, clinched the matter with me. Big, deep-draft fishing vessels with heavy, powerful engines and lots of ballast were out there that day making miserable weather of it while the *Lady* just went on about her business with scarcely more than a little dignified twist when a big one dropped out from under one corner of her stern occasionally. The exterior of *Lady Luck* is very well shown in the illustration. Her arrangement as to accommodations is rather a decided departure from standard practice in the faster type of cruisers. In the extreme bow is the rope and chain locker, then comes a state-room eight feet long, containing two fixed berths with box mattresses, with lockers under. At the end of one berth is a five-drawer dresser while opposite this is the companionway to or from the forward deck with sliding hatch over.

Just aft of this is the engine compartment, which has full head room its entire length, the twin screw installation allows of course, a passageway between the power plants and when the boat is at anchor, the center floor and companionways of the bridge are swung and lifted up, instantly giving passage from forward cabin to cockpit all on the same floor level. The bridge contains complete controls as well as electric starting controls, so that it is unnecessary to go near the engine room for starting or handling the boat. The center floor of the bridge is in two sections and for quick and easy access to the engine room from the bridge, the forward section swings up, the center portion of the forward bulkhead of the bridge (immediately under the steering wheel) swings to one side, disclosing a short companion down to engine room floor level inside the bridge. A door in the center of one side of the bridge gives easy access to the decks. The companion to the aft cabin is in the center and leads to the space directly between toilet and galley rooms which are on port and starboard sides respectively. The main cabin is directly connected or open to this passageway, and this cabin contains two wide box mattress seats upholstered in Spanish leather and having the same upholstery on the lazy backs. On either side at the rear of this cabin is a dresser, one having one large space for storage of large pieces of equipment or clothes and the other with five drawers. Both of these dressers have large bevel plate glass mirrors.

The ports are solid brass castings, swinging inside and having brass sleeves that extend clear in around the port light frame and flange over the outside of the planking.

Fuel tanks are located one on either side of the bridge and under the trunks. Water tanks are under the seats in aft cabin. Struts and rudder are all bronze. Using both engines at maximum power, a speed of 15 knots is obtained. Cruising at a little over half power on one engine, the resulting speed of 8 knots is very satisfactory and economical.

Frames are sawed oak, and planking as well as pilot house and the interior finish are Port Orford cedar. Decks are canvas covered set in marine glue.

Safety Cove was reached the afternoon of the 6th, over half way home in three days' running! A real gale was blowing, however, next morning, and with Queen Charlotte right next door, we were quite content to spend all of the 7th in the quiet waters of the cove. Anchored there when we arrived, and staying all through the 7th, during the gale that blew itself out in about 36 hours, was a Canadian Patrol Boat in the Fisheries Service; a ship about 150 feet long. A mate and the chief engineer came aboard our ship to beg tobacco, having been out on patrol so long their supply was exhausted. They asked use fully as many questions as we asked them. We were told that during the war several German families had settled in the cove, had cleared land back from the beach, built homes and so on, but the absolute lack of transportation, coupled probably with the collapse of their credit at home, had caused them to abandon their homesteads shortly after the close of the war. That afternoon we landed and walked back over a carefully made puncheon road to these farms.

The work those people had done was positively awe inspiring. Acre after acre of fine black soil had been cleared, ditched and fenced; stumps had been pulled by the thousand and piled skysky high; fine log houses were there, on with two stories and a big balcony or sleeping porch; and over it all the black curse of lonesomeness that only the abandoned home can muster.

On the 8th, Queen Charlotte Sound was navigated in a thick

(Continued on page 144)

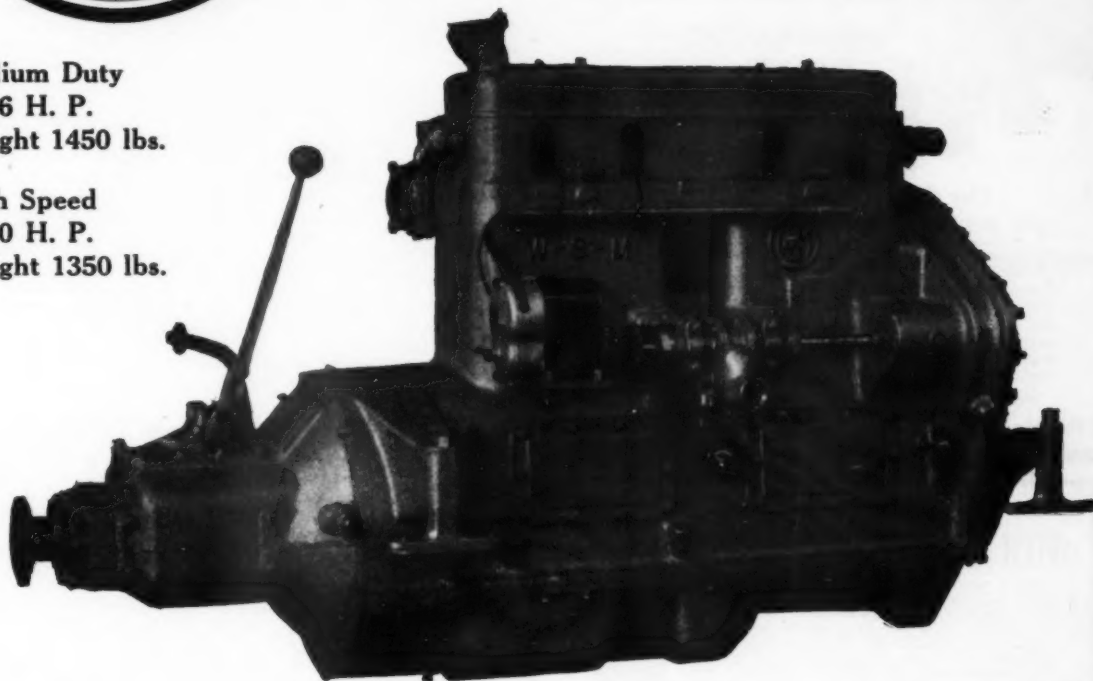


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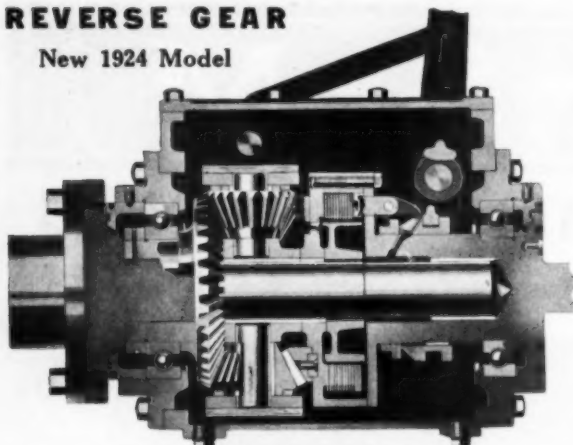
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BOAT SUPPLIES

Gullible Travelers

(Continued from page 142)

fog, which increased the interest greatly. Scarlet Point fog horn bellowed in our right ears, however, at exactly the right time and from the right quarter, so we all looked wise and felt superior. From thence—as "Xenophon's" Anabasis has it—we traveled several parasangs anchoring just before dark in Port Neville, about half way through those dear Johnstone Straits, which next day fully lived up to its evil reputation. We were homeward bound, however, our boat and engines were perfect, and with a great big tide and a stearn wind, we certainly traveled with great speed, passing through Seymour Narrows an hour before slack water and running until 11:00 P. M. when we crossed the bar into Union Bay, Baynes Sound, where are very large coal bunkers, and a mighty nice little town, looking as neat as a pin in spite of the coal industry.

From Union Bay to Nanaimo was a fine six-hour run in perfect weather, but we arrived at Dodd Narrows too soon for slack water and at practically full strength of tide, which was from 8 to 12 knots against us. There was an overflow of what looked like a foot to eighteen inches extending clear across the Narrows which are only about 80 feet wide and 200 long. With both engines opened up full we headed straight in, struck the overflow, twisted this way and that slightly as Skipper spun the wheel to keep her straight and then *Lady Luck* seemed to stop completely, rise straight up a foot or more and then begin to creep ahead again, gathering momentum each second, until we went on out in good style, past a tug which was running slowly in circles waiting for slack water. Thrilling? Yes. Try it again? Well, maybe sometime, in as good a boat with as much power.

That night we reached an anchorage that very few Puget Sound yachtsmen know, although within a hundred miles of Seattle. Montague Harbor is one of the most magnificently beautiful and best protected anchorages we encountered on the whole voyage. Made up of a dozen small fir-covered isles there are that many entrances and exits, and all these passageways seen from the mirror-like salt lake inside by the light of the silvery full moon would impart romance to the Pharaoh's mummy.

While all members of the crew were happy, the weather perfect and the larder still plentifully stocked yet, after being away even on such a cruise, for two months, we were all thinking about certain people we wanted to see very much, and when the whistle was blown for Manzanita, after 2,000 miles of Paradise on earth, I for one felt a lump in my throat. Had I been compelled to say something definite the instant that the Skipper's wife and kids ran down to his float, waving caps, aprons, etc., I hesitate even to guess what my articulation would have sounded like.

In conclusion, and summing up, I offer this recipe: To one good boat, add two engines equally as good as those two wonderful Scripps machines, from which not even a single spark plug, bolt or nut was once removed or touched in all those hours on hours, day after day; mix in just three other good fellows besides yourself and stir up things until you have made that cruise.

Havana's First International Races

(Continued from page 98)

Cub declaring she had led by something less than a foot as the boats crossed the finish line.

In the second heat of the Sweepstakes class, Mambisa also started but although her owner and driver, A. M. Puente, drove a fine race, his boat was far outclassed in speed by the two American boats. Mary in this heat won by a margin of several seconds over Baby Cub, with Mambisa third. A tie for first place in the Sweepstakes class was thus established, but as Mary had made the best total elapsed time for the two heats she was declared the winner.

In the party of Americans who were so royally entertained by the officers and members of the Havana Yacht Club were Commodore and Mrs. H. A. Jackson of New York; H. R. Duckwall of Indianapolis; F. P. Huckins of Boston; William Bruns of New York; J. P. Stoltz of Miami Beach; Odus Porter of Indianapolis; C. E. Ricker of Indianapolis; Howard Lyon of New York; C. M. Rosenfeld, of New York; J. A. Williams of Buffalo; J. Lee Barrett of Detroit; Jessie Jay of Chicago; E. A. Jimenis and C. F. Chapman of New York.

Vice-Commodore R. Posso of the Habana Yacht Club was in charge of the race and was ably assisted by Commodore Peter Morales, A. M. Puente, and a number of other members of the Habana Yacht Club. Commodores Morales and Posso left nothing undone for the entertainment of the visitors, and it is hard to imagine how it would be possible to put in a more enjoyable four days than we spent this year at the Havana Regatta.

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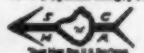
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The Crew Question Answered

(Continued from page 23)

instance, to be sitting on the quarter deck with his guests when a member of the crew slouches aft with a plate of stew in his hand and a request to "Smell that, sir. The steward is giving us rotten meat." The steward has been lining his pocket at the expense of the crew's stomachs.

The other way involves the purchase of all stores by the owner. This method is recommended to owners who live aboard during the season. It will not commend itself to those who take to yachting as a relief from the cares and worries of shore existence, but it will keep down the cost. It may also be objected to on the score that it will give the crew opportunity for grumbling over the quality and quantity of food that is served them.

But in this connection let me give another incident. A friend of mine, feeling in an expensive mood one morning, told his deck hand that he was going ashore for food and asked him what he would like. The man, who was a good sailor, did not stop work as he said,

"Don't ask me, sir. Please yourself like you always do."

The owner, still feeling bland and generous, replied, "But I've got to get something and you might as well say what you like. Lamb, roast beef, veal, or what?"

"I tell you sir it don't make any difference to me. I'm a sailor and a sailor always grumbles, no matter what he eats."

And there you are. Not all of them admit it.

Thus far in this article I have had in mind the problems that beset the owner of a large motor yacht—say an 80- or a 100-footer. Such an owner will require a crew of four to six men—captain, engineer, steward, deck hand, plus, perhaps, a cook and another foremast hand. With such a crew it will not be necessary for the owner to do a lick of work while at anchor or under way. He may loll in comfort in a steamer chair and consider himself the passenger that he is. With such a boat he may go anywhere with as much assurance as if he were confiding his carcass to the mercies of a coastwise passenger steamer. But though he uses his yacht solely for pleasure of a passive, non-participating sort, he should operate it on a purely business basis.

The first consideration for the purchaser of a yacht of this size is the selection of a captain who may be trusted as a navigator, as an executive, and as a man. When he is found, he is worth his weight in gold, should be retained throughout the year, and be dealt with as the owner of a large business deals with his most important executive.

A way *not* to deal with such a man is this: Send your private secretary aboard to interview the captain and pass on repairs or needed equipment that have been suggested by the latter. Your captain is a man of high intelligence in his own particular line. He may not know as much about your personal wishes or resources as your secretary does, but he knows a heap sight more about the necessity for strengthening an engine bed or reboring a shaft log. The captain of a vessel feels himself to be the superior of any intermediary whom you may send to deal with him. By every tradition of the sea he is a responsible person and a commander of men. You, as his employer, are his only superior, and he considers that his rights have been infringed upon unless he deals with you as man to man.

For the same reason it is impolitic to delegate your secretary, or a broker, or a shipping master to hire men who will serve under your captain. He should have the sole right to hire men.

If he is dissatisfied with them, and they fail to obey his orders, it is up to him to discharge them and employ others. The captain of a large yacht, in short, should be given carte blanche in the regulation of affairs on board.

I have heard of a 90-footer on which every man from captain to deck hand dealt personally with the owner. Complaints and suggestions were brought to him and each man was responsible to the owner for the maintenance of a certain part of the vessel. Strangely enough, this was a happy ship. Complaints were few, and changes in the personnel were almost unknown. If this were not an exception to the general rule it would not be worth the mention. Ordinarily, chaos will result if full authority is not vested with the captain.

As indicative of the kind of confidence that the owner should place in his captain, I may mention the attitude of an experienced yacht builder. This builder told me that when a yacht is brought in for repairs—say to stop a leak—he always asks the captain what he would do to fix it. The builder has repaired many leaks by many expedients. He is not looking for shoulders on which to load the blame in case the job is not done right. No. He recognizes that while he knows boats in general better than the captain does, the captain knows his own boat better than he does, and his solution of the problem may be the best one.

(Continued on page 148)



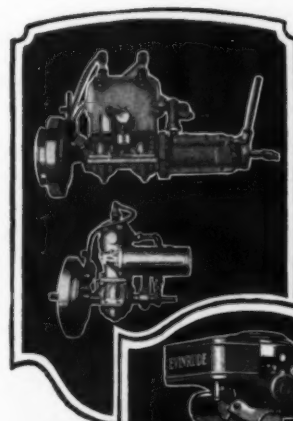
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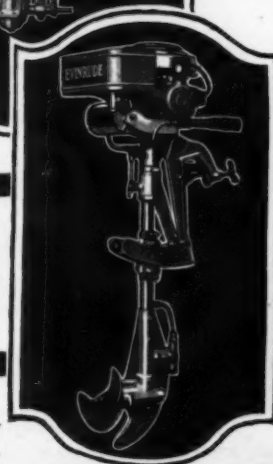
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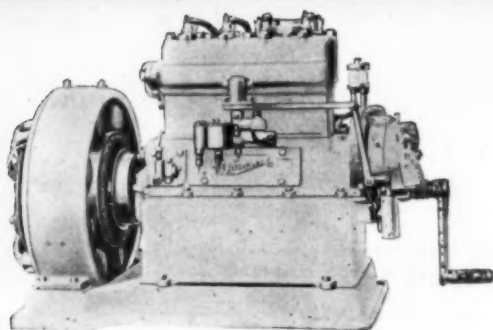


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They know that Universal means nothing short of four-cylinders—with a quietness and smoothness that adds immeasurably to the comfort of life afloat.

There's a size and type of Universal Light Plant for every need—2 to 25 K.W., in 32, 60 and 110 volt ratings, for use both with and without batteries. Write for catalog and references of recent installations.

UNIVERSAL MOTOR COMPANY

40 Ceape St., Oshkosh, Wis.

Universal
 Sizes: 2 K.W. to 25 K.W.
 Electric Plants



Builders also of the famous Universal 9-12 H. P., 4 cylinder marine motor, Universal Stationary Engines and Centrifugal Pumping Sets.

The Crew Question Answered

(Continued from page 146)

And, speaking of boat-builders, the owner need not fear that his captain is feathering his nest when ordering repairs from a responsible yard. A yard owner with a reputation for square dealing will quickly show the door to any captain who suggests that a rake-off is due him.

The article on the crew question in the April issue was mainly concerned with the relationship of the owner to a one-man crew. In that article it was stated that a single paid hand could care for a boat up to 50 feet in length provided the owner took some part of the duty while under way—steering, cooking, etc. Of course many owners prefer to do all the work of handling the boat—which, now that we have engine-starters, electric capstans, and the like, isn't arduous—and hire a man merely to cook and clean up.

But on the basis that the owner or his party do the cooking and take their tricks at the wheel, the next step up in crew size comes with a boat between 50 and 60 feet. There will be two men, one of whom will be the captain and the other the engineer. Three men will be required for a 65-footer, because the extra space below and the greater number of guests accommodated increases the domestic work and makes the inclusion of a cook virtually obligatory. Add another five or ten feet to the length of the boat and you have a motor tender to be cared for, plus a dignity that is expected of you, and a fourth man will be required on deck.

A new owner will naturally require information on the subject of clothes for this crew of his. How much clothing should he buy, and does it become the property of the man for whom it is bought? Some owners supply, and nearly all paid hands expect, a complete outfit from shoes to toothbrush. An ample equipment, however, consists of a serge uniform, a duck suit, dungarees or other working clothes, underwear, a couple of pairs of tennis slippers, a hat, and no more. Do not give your new man a blanket order to go to the nearest uniform house and fix himself up. Write down a list of the things you intend to pay for, and if he exceeds that list it will be on his own responsibility.

Naturally you expect your men to keep the clothes if they stay with you throughout the season. But what if a man quits the job after he has been with you a week? Does he walk ashore with his clothes? Yes, if you don't see him go. He believes that they belong to him if he leaves the day he puts them on, and he would say, "What good is the outfit to anybody but me? I certainly wouldn't wear anybody else's cast-offs, and I wouldn't expect anybody to wear mine." And right he is. You wouldn't expect the six-foot successor of a five-footer to wear the same clothes, but if you make the five-footer understand that the clothes stay aboard when he goes he may not be so anxious to quit the job. And if he quits anyway, leaving the clothes behind, at least he won't make a quick trip to a secondhand clothing store.

And by the way. You will often hear of two men, each excellent in his way, who simply can't get along with each other. If they don't jibe, their narrow quarters in the bow of the boat don't improve the situation. In a few days they will be at daggers' points and the owner will have to make a choice between them. When one of them has been paid off it is a good plan to suggest to the remaining man that he pick the replacement. He will choose some old shipmate, and if the man proves capable there will be better harmony aboard.

Since writing my April article I have been told of a dodge that brings home my previous point of hiring your first crew through a broker or someone else who is sure of his ground. The dodge works like this.

Olaf is a Scowegian of tremendous physique, good disposition, friendly temperament, and excellent seagoing attainments. He leaves a good job at the end of the season to pick up another good job in the South. His work is so satisfactory that he carries with him the highest recommendation that his owner can set to paper. But Olaf's appearance is so prepossessing that he does not need a written boost, and when he meets his friend Oscar in some sailors' boarding house he is easily persuaded to part with the commendatory letter.

Now Oscar belongs to a different breed of cats. He is a thin-faced, narrow-chested Swede with a mean disposition and he finds it hard to get a good soft job and still harder to obtain a letter of praise after he has been fired off feet first. However, with Olaf's testimonial he is pretty well fixed, and he comes to you to offer his services.

If you do no more than read the letter you will hire him without question. But if you call up the man who wrote the letter and say, "About this Olaf Ericson, whom you recommend. Is he an undersized weasel with a cast in one eye who looks as if he would steal the varnish off an oak rail?" you

(Continued on page 150)

Where Your Motor Dollar Goes the Farthest

THERE'S a definite reason for the persistent preference among motor-wise boat-owners for Universal's smooth four-cylinder power. Those whose experience with Universal covers years, tell us they prefer Universal for what they know it will render them *next* season—and the next—and for seasons to come.

For there has never been an untried idea or a freakish design embodied in any Universal motor since the first one went forth to tackle its job years ago.

Refinements—little niceties here and there—have been added as marine engineering advanced, until, in the present Universal, we believe you buy more useful *seasons* of power—more hours of performance unmarred by "tinkering"—than your motor dollar ever bought before.

Universal is simple—powerful—rugged. Oversize where it counts—instead of where it merely shows. And not the least of its pleasing surprises for you will be its moderate cost.

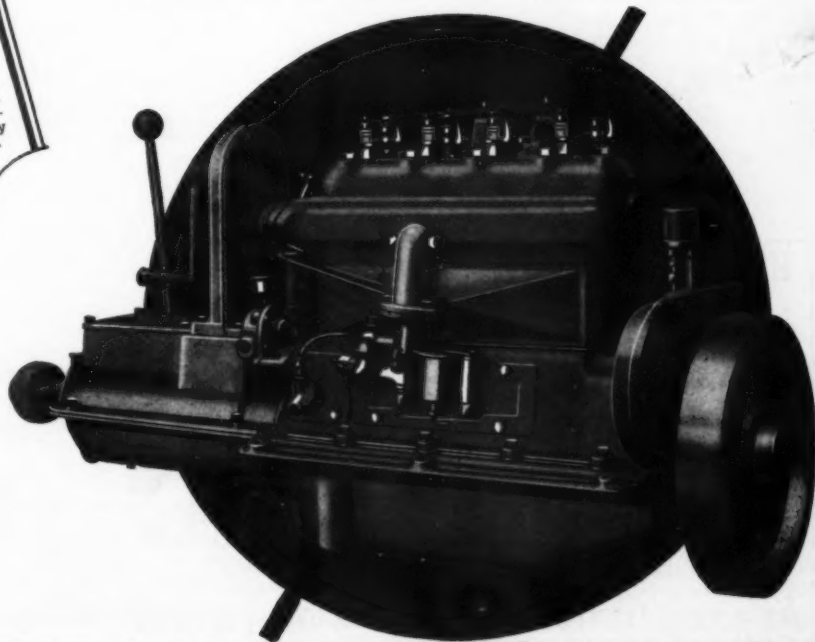
Write for catalog, mentioning size and type of craft you plan. Atwater-Kent igniter or Bosch magneto; self-starter if desired.

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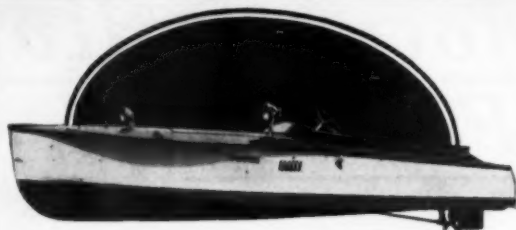
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A Speedy Richardson Runabout

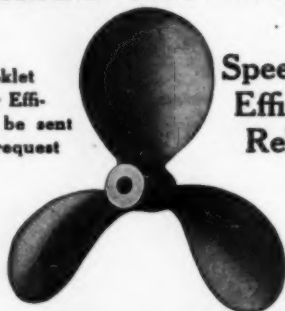
Inspection boats furnished to U. S. Engineer's Dept., one to the Chicago Dept., the other to Huntington, W. Va., Dept. Length 35', beam 8' 6", draft 3'. Motor 6 cylinder Hall-Scott. Would make an ideal high speed day cruiser.

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The Crew Question Answered

(Continued from page 148)

will learn something to your advantage. And Oscar will look farther for a job.

New owners are sometimes puzzled by the degree to which discipline and etiquette should be observed. Should the crew man the rail and the coxswain pipe the side when the owner comes aboard or goes ashore? Should the code regulating the display of flags be fully complied with? With respect to all questions of etiquette the novice may safely imitate his fellow club members just as a gentleman farmer sometimes plants his crops by following the lead of the son of the soil who lives across the way. As to rail-manning and side-piping, it will take a pretty large yacht to carry off such ceremony with dignity. By all means have your captain or perhaps two men attend the gangway to greet you and fend off the tender. But don't carry ceremonial much farther. The crew may be trusted to observe flag etiquette to the extent at least of flying Owner-absent and Crew-at-meal pennants, inasmuch as these hoists answer questions and stave off annoying interruptions.

The question of apportioning cleaning stations may be dismissed with a word or two. If there are two deck hands one may be made responsible for the starboard side and the other for the port. The engineer looks after the power plant, and the cook the galley and staterooms and so on. Crews should be given, however, abandon-ship and fire stations, and made to understand what is expected of them in case of accident.

Owners and their guests are rarely disturbed by democratic tendencies of the crew. Your trained sailor, when relieved of duty aft, usually takes himself forward with the precision of a homing pigeon. Your matters of conversation are not his, and he feels as much out of place on the quarter deck or bridge as you would in the forecabin. His home forward is his castle, as a matter of fact, and he is as likely to resent your presence there as you, his presence aft. Under way, discipline insensibly slackens but even so the average sailor is uncomfortable with the owner's party. He does not care to throw himself open to the suspicion of boot-licking, and unless duty or the weather brings him aft he keeps to himself.

There are, perhaps, few owners who can afford to maintain a crew on part pay throughout the winter months. It is characteristic of us that we get the most boat we can for our money and economize on maintenance. However, the man who gets a good crew can hardly spend money to better advantage than to provide work for his men in the off season. A boat kept continuously in the pink of condition lives longer and looks better than one that is allowed periodically to deteriorate.

But if a man cannot afford to keep his crew the year round there is at least one thing of which he should be extremely careful. He should satisfy himself by personal inspection that his boat is laid up in perfect condition before he pays out a dollar of the last month's wages.

In my quest for data for this article I have been impressed over and over with the importance of this matter. You may lay your boat up with no intention whatever of disposing of her during the winter. But one of a dozen things may happen to make the sale of her necessary, and her superficial appearance often determines the amount that you can get for her.

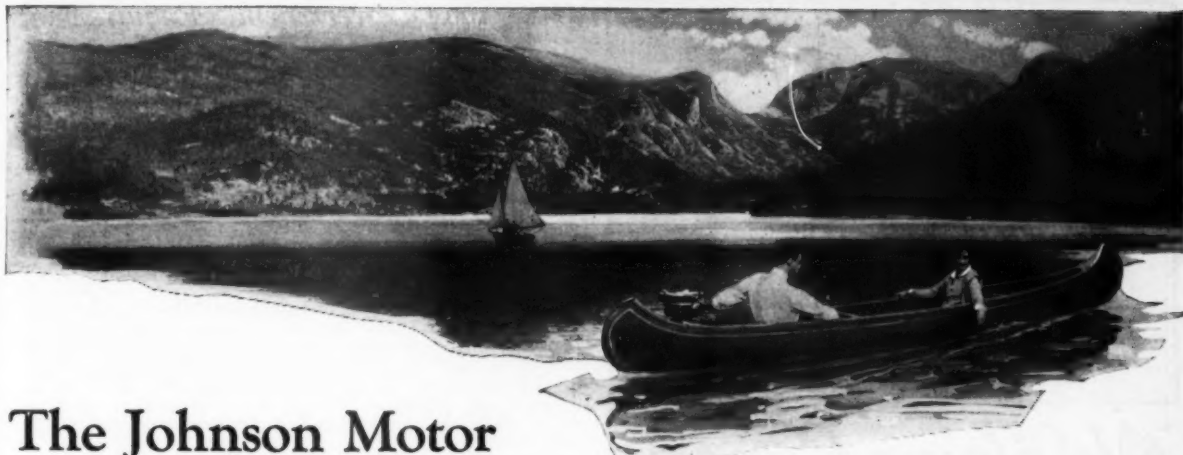
If a prospective purchaser goes aboard your boat in a yard and finds her littered from stern to stern with paper, old clothes, rusty tin cans, half empty ketchup bottles and such trash he cannot possibly get a good impression of her. He may acknowledge that under the dirty paint and the refuse she is in prime condition, but in spite of himself he will look farther until he finds a boat that seems neat and homey. Now if your men have any reason for dissatisfaction with you or the boat, they will not take pains to make her shipshape. Even with the best of intentions they are not likely to lavish much care on a job that has only three or four days to run.

So, no matter how pressing your other duties may be, make it a cardinal rule that before paying off your crew at the season's end you will yourself go aboard and inspect your boat. If the work has not been done right tell the men to whistle for their money until it is done right. If they jump ship without waiting for their pay, have the work done by yard men. In any event, lay her up for the winter in perfect condition, and make sure that all cushions, awnings, etc. are thoroughly dry before being placed in lockers.

While I do not flatter myself in the foregoing that I have solved the crew question for the new motor boat owner, I do feel that I have brought to the attention of the novice who reads this a number of things that would escape him unless he personally devoted several days to research work among friends and acquaintances.

The crew problem is not one that can be solved by or eliminated by fiat or by legislation. Individuals will get around

(Continued on page 156)



The Johnson Motor Gets You There—and Back On Any Type of Boat

THOUSANDS of fishermen, sportsmen, sailors and summer cottagers have found a lot of attractive features about the Johnson Outboard Motor in addition to its unapproached dependability—though of course that's really the feature that made people buy more Johnson Motors from dealers last year than any other make.

Johnson owners, particularly those who have had previous experience with any other detachable boat motor, will tell you that the Johnson is the only motor that can be used on any type of boat or canoe—square-stern or pointed-stern—and shifted in a jiffy from one boat or canoe to another without altering the boat.

They have found that the Johnson Motor is not too heavy for the lightest boat and that it has ample power for the heaviest boat a man can row.

Its two-cylinder opposed construction eliminates vibration, reduces noise to the minimum and delivers a steady flow of power—full 2 horse-power—that will drive a rowboat from 7 to 9 miles per hour and a canoe from 10 to 12.

Johnson's exclusive universal steering and reversing feature with automatic tilt and the Johnson shock-absorber drive prevent damage from submerged obstructions and drive your boat wherever it will float. The Johnson float-feed, throttle-controlled carburetor gives a perfect firing mixture at all speeds and temperatures and makes starting sure and easy. The Johnson Quick-Action Magneto delivers a hot spark even at slowest speeds and eliminates the uncertainty and extra weight of batteries, coils, etc.

These are the things that give the Johnson Motor a type of performance that you can find in no other motor.

Pack your Johnson in this suitcase and take it with you—anywhere



What the Johnson Motor Does
Makes rowing obsolete by furnishing dependable, inexpensive water transportation.
Opens up distant and unfrequented fishing grounds for the fisherman.
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When used on small sail boats—even up to 25 and 30 feet—it is absolute insurance against being becalmed.
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Runs errands at the summer cottage or camp—even if "town" is miles away.
Gives you the only really portable marine engine.

And with all this power, flexibility and dependability goes the only real portability for the Johnson weighs

Only 35 Pounds

Not only the lightest outboard motor but the lightest per horse-power as proved by any standard scale.

It's an easy "one hand carry;" it can be carried on the running board of your car or packed in a suitcase that fits under a Pullman berth.

Go to the Johnson dealer and get a free demonstration in the boat—your own boat. That will tell you more about the Johnson Motor than anything we can say. If you don't know the Johnson dealer write us for FREE Catalog and we will gladly send you his name.

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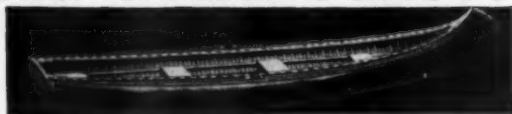
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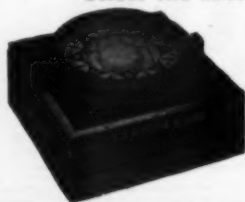
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Are the Government Requirements Driving You from Boating?

(Continued from page 44)

should cause anyone the slightest hesitancy about buying a boat or enjoying motor boating to his heart's content. There is nothing oppressive. Arbitrary decisions, as we have on land by the motorcycle cop, are not possible and should not be allowed by the boat owner. The law is very plain and simple. It gives no power of discretion or discrimination to local authorities. There can be no summons issued; neither can there be any local fines imposed. No local or civil court has the slightest jurisdiction.

But we are repeatedly hearing of the motor boatman's rights being violated by local government employees. In many instances, they may be simply carrying out the instructions of their chiefs. We believe that in a great majority of cases this is due to their ignorance of the motor boat law and the fact that the motor boat regulations are being handled by a branch of the government which is not familiar with the work and duties of the Bureau of Navigation at Washington. It is not at all the fault of the latter but the Bureau is undermanned and under financed to properly take care of their duties.

Whenever the rights of the motor boatmen are jeopardized, MoToR BOATING will be very glad to take up with Washington for adjustment any cases where we believe the motor boatman is in the right provided the detailed facts are brought to our attention with substantial proof whenever same is possible. We will not refer cases to Washington which in our opinion are penalties or fines justly placed for violations which could have been or should have been avoided.

Let us illustrate a few particular instances where local officials were taking it upon themselves to make or interpret the motor boat law. The law says that for an owner to carry passengers for hire on his boat he must have an operator's license. The law further states, in effect, that no examination for an operator's license is required but the license must be given upon application. Not long ago it was brought to the writer's attention that licenses were being refused to many applicants because they could not answer certain navigation problems which a certain local steamboat inspector's office asked of the applicants. They were told to go home and study. Many applications were refused even a second and third time. To prove that this was being done, the writer appeared one day at the Custom House with all the necessary application blanks properly filled out and sworn to. He requested an operator's license. He was told to go to Mr. So and So for his examination. When he found Mr. So and So and the questioning began, the writer refused to answer but demanded his license. Quite naturally, he was refused by the Mr. So and So who had no authority to depart from the instructions of his chief. But when the practice was referred to Washington, as it of course was by our office, it did not take many hours for instructions to reach the particular Custom House. These instructions have made it possible for motor boatmen since that date to obtain their operators' licenses without an examination of any kind.

Most recent complaints which have been reaching us are based on a ruling, also by local officials, that motor boats must have their equipment on board at all times while their engines are running, even though their boats are not underway. Complaints have reached us of inspections which have been made while boats are at anchor and even tied to a wharf with their engines running, and of fines which have been imposed. The law specifically states that equipment is required to be on board only while the boat is underway. A boat is only underway when she is not at anchor, aground, or tied fast to the shore. A boat tied to a wharf is *not* underway. A boat at anchor is not underway; whether the boat's engines are going or not has nothing to do with a boat being underway or not being underway. No local authority has any right to rule that a boat is underway when she is tied to the dock or at anchor with her engines in motion, and therefore subject to inspection. Inspections made under such circumstances are unlawful and the inspectors are trespassing. If you have been fined for a violation discovered under these conditions, you are entitled to a refund at least. We feel sure the Bureau of Navigation at Washington will be only too glad to adjust such a complaint if it is brought to their attention.

New Shipyard in the West Indies

A new undertaking has just been inaugurated by the R. T. Symonette Shipyards, Ltd., at Nassau, B. W. I. This yard, which is being fitted with three marine railways, will be capable of handling the largest vessels which enter their harbor, and will fill a long felt want in the West Indies. In connection with their local and foreign trade, they are open for several high class marine supply agencies.



While You Are Investigating This Engine Question, Don't Forget to Look Into the Reliable MILLER

We want you to compare Miller Motors in design, in features, quality of construction and in price, with any other motors of their respective sizes on the market. You can pay 100% to 200% more for the same amount of power, or you can probably buy a smaller motor of similar power rating for 50% to 100% less.

But if you will take the time to make such a study, we are satisfied that you will be impressed by the honesty of Miller construction, and by the real value in our prices. That is what 90% of the engine buyers want today.

Miller Motors have been on the market for nearly twenty years. They have made firm friends all over the world. They have been used in all sizes and types of boats. They made good everywhere, or we could not have stayed in the business so long.

We never tried to build a very cheap motor, nor a very expensive one. But we have always tried and succeeded in building a motor that stands up well

under hard service and lasts for years with very little attention or repairs.

Miller Motors have all approved up-to-date features and their design follows the best marine engineering practice. They are built for boat work exclusively and will deliver more than their rated power in continuous service, hour after hour, and day after day.

Single Cylinder Models, Medium Duty

F-1, 4 H. P., $4\frac{1}{4}" \times 5"$, weight 410 lbs.
I-1, 6 H. P., $5\frac{1}{4}" \times 6"$, weight 500 lbs.

Two Cylinder Models, Medium Duty

F-2, 10 H. P., $4\frac{1}{4}" \times 6"$, weight 625 lbs.
I-2, 14 H. P., $5\frac{1}{4}" \times 6\frac{1}{2}"$, weight 800 lbs.

Four Cylinder Models, Medium Duty

D-4, 6-14 H. P., $2\frac{3}{4}" \times 4"$, weight 250 lbs.
E-4, 12-20 H. P., $3\frac{1}{4}" \times 5"$, weight 700 lbs.
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R-4, 28-35 H. P., $5\frac{1}{4}" \times 7\frac{1}{4}"$, weight 2000 lbs.
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Miller Kerosene Attachment at slight extra charge

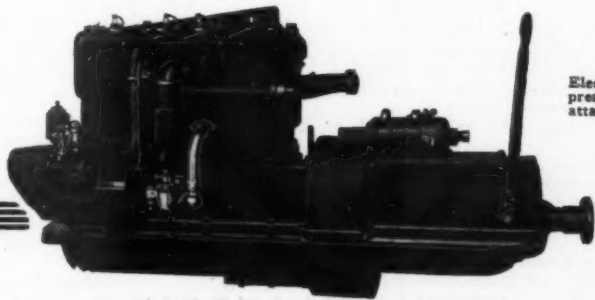
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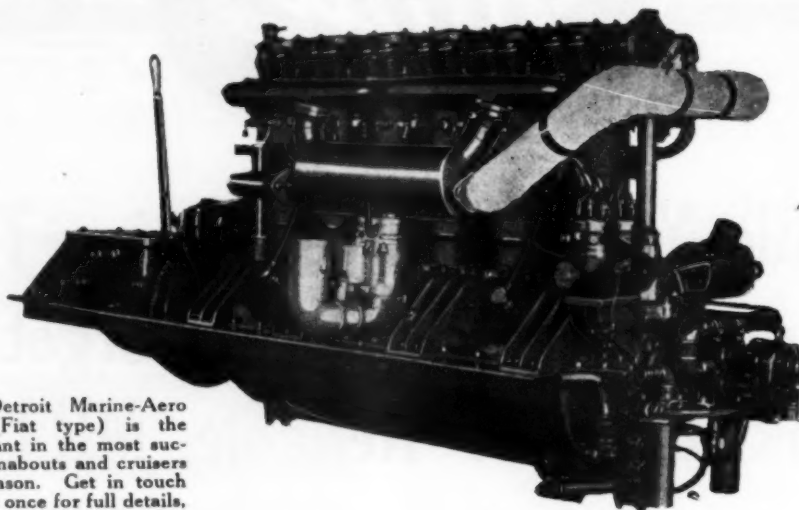
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The Sprit of the Sea Enshrined

(Continued from page 35)

so it is to the reproduction in miniature of the more modern vessel that our attention is directed.

Since the days of the East Indiaman—when the seas became free to all and Americans took up the science of shipbuilding, striding far in advance of their British compeers, to be followed and then again overtaken by them with the advent of iron ships—nothing by the hand of man has been made so beautiful as the clipper ship.

They were the outcome of a very practical need for carrying capacity and speed combined with the power to withstand the sometimes hostile winds and always treacherous sea.

This gradually, and especially about the time of the forty-niners, became a race for speed, capacity and even to some extent seaworthiness being sacrificed to that end and when it is considered that these ships could, on occasion do their 436 miles in a day or an average of 18½ miles per hour (Lightning 1854), it will be granted that the object was attained.

To this desire for speed we are indebted for the graceful lines aloft and a low of the most beautiful ships of all time—the clipper.

Thus it is not surprising that their little replicas from a few inches in length to several feet should be sought for and highly prized by their owners, as this is the kind the man with some sea-water in his blood appreciates best, and which can conjure up for him dreams of swift flight over sunlit waters, fierce fights with the elements under goose-winged topsails, with the final anchoring in far harbors.

He delights to study the details; the tiny block small as a pin's head, the turned-in deadeyes with their lanyards rove and the end hitched over the backstays; to follow the buntlines from the foot of the sails to their belaying pins on deck; the anchor catted or lashed on the fore-castle-head; the pumps, wheel, binnacle and other deck fittings; the holystoned deck or bright copper sheathing.

The modern models may be divided into those made by the sailor aboard, those made by the retired sailor ashore, those interested in ships who have taken up the work as a hobby or profession and those made in the machine tool equipped workshop.

The ones made aboard ship are as a rule inclined to be heavy and not so true to scale, because they are made from the odds

and ends of material available with the simplest of tools and built by sight rather than measurement, but they have a quality all their own, a sort of sea air atmosphere enveloping them and usually great fidelity to detail as well as that indefinable quality of authenticity—the replica of an actual ship by an actual member of the crew.

Those made by the retired sailors vary greatly in quality, some men trust to memory alone, and the best of memories are unreliable, some use scale drawings to aid them. Then again some men are more patient, nimble fingered and ingenious than others and take the trouble to hunt out or make the most suitable tools and material. The results of their handiwork consequently varies enormously, as the knowing collector can testify.

The landlubber who essays a model has the additional handicap of having to get all his details from pictures, plans or other models. He does not know almost automatically where each rope, block or fitting belongs, so that if he went aboard a strange ship he could make sail in the dark, as can the efficient sailor—drunk or sober.

To set against these drawbacks: to start a model or at any rate finish it, because many more are commenced than completed, a man must have great enthusiasm and lots of spare time, though models are often years in the making, therefore it is as well that they are interesting at all stages of the building.

The model made in a well equipped factory has again a different quality; though it may lack a something in the atmosphere and handcraft touch of the sailor-made model it has a perfection in finish which the man without this equipment finds almost impossible to achieve.

The verge very perilously close to the steamship models seen in the passenger offices, which are more inclined to be jewelry-craft and objects entirely apart from the sailing vessel model.

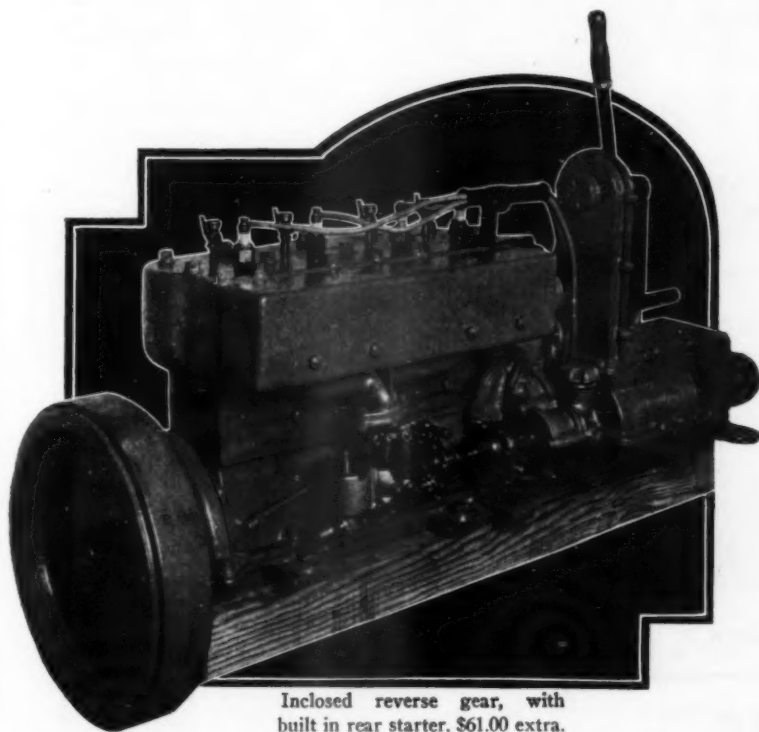
Nothing more beautiful and perfectly finished can be imagined than some of these models the writer has seen, yet to him that exclusive individual touch was missing, and though we would much like to have one, he could work up more enthusiasm over a well made but rougher specimen. This is

(Continued on page 156)

4 cylinders 4 cycle for \$187⁵⁰

THIS unprecedented price for a four cylinder, four cycle engine brings within the reach of everyone, a smooth flexible motor, at a price that has formerly been paid for one of the "chug-chug" type. This has only been possible because of standard construction in large quantities, which permits of a lower overhead cost per motor. When installed it provides a fast runabout — a reliable cruiser — a powerful auxiliary work boat.

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Inclosed reverse gear, with built in rear starter, \$61.00 extra.

The International-16

The International—16 develops ten horsepower at 500 R.P.M., and up to 18 horsepower at 1200 R.P.M. Weighing only 290 pounds and compact in construction, makes it an unusually adaptable engine.

With interchangeable Ford parts, the International 16 provides a motor that rivals the automobile as a mode of transportation — any Ford service man can overhaul it at small cost.

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Every Boat should have a loud, reliable, electric siren.

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Crews and Club attendants furnished without Charge

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Telephone, Main 0804

The Spirit of the Sea Enshrined

(Continued from page 154)

not to suggest that roughness is a desirable quality, but rather that it at times accompanies an interesting specimen.

Another kind are the builder's models and half models. These are hulls only, they are practical, authentic and interesting but not very decorative.

The shellback is inclined to set his model as floating in a painted sea because that is the way a ship would look, and he is not much interested in the underwater body which he rarely sees. The writer started to make his Torrens in that manner, but changed his mind and made the complete hull and is glad he did so; there is a certain satisfaction in being able to see all round and underneath.

A ship with sails set does however seem somewhat incongruous when set high and dry on chocks.

Among the freak models (usually sailormade) are the half-models consisting of half a hull, the masts and part of the sails carved in wood, sometimes rigged, at others not, the whole fastened to a painted sky in a case to hang on the wall like a high relief plaque or picture.

The ships in bottles again are ingenious and tricky to make. A variation of this is the ship outside a bottle, one of these forms a part of the collection at India House, it is made of leather, the hull encasing a large wine bottle the whole being slung on trunions so that the contents may be poured—it is now empty.

Incidentally this semi-public collection (it belongs to a lunch club) is the only one of any considerable numbers in New York. It is time that this, the largest seaport of the world had a representative public collection. The only important one in the country appears to be at the Peabody Museum, tucked away at Salem, Mass. The Ship Model Society is worthily, but necessarily slowly working to this end and has held several exhibitions of the members' own cherished examples.

Such collections will be found in the chief cities of all the maritime countries, such as England, Scandinavia and France. (Some of the most beautiful clippers the world has seen were and are French).

It is all too often forgotten that the early fortunes and prosperity of this country were built on shipbuilding and shipping ventures. Whaling has almost ceased and the mercantile marine is now in sad case, but once the clipper ships of America were the glory of the seas and spread the fame of the country from Bantary Bay to far Cathay.

By and large the shipmodel of whatever type, if truly and lovingly made, is not only extremely decorative but is something to study and linger over continually, providing always new interest as should all good works of art.

The Crew Question Answered

(Continued from page 150)

it by paying more money than the next man can afford—thereby spoiling yacht sailors still more. Others who are expert yachtsmen will solve it temporarily by hiring men out of the merchant service and training them to yacht duty. Such men can hardly expect to keep a crew more than a season or two but must constantly be bringing new men to their service as the old ones leave for higher wages and softer jobs. Still others get along with their men through the knack of leadership.

To each owner the problem presents a different aspect. But in the face of all annoyances that may arise every yachtsman should remember three things. One, that the first year is the worst, two that doing your own work is better than putting up with insolence or incompetence, and three, that no matter where a man is fired a temporary substitute may generally be obtained at a not extortionate figure to bring the yacht back to her home port.

In conclusion I present a wage scale, which, while not by any means a standard, is at least comprehensive enough to give the beginner an idea of what his crew should cost him per month.

Cabin boy.....	\$50
Waiter.....	65-75
Deck hand.....	65-75
Cook.....	125-150
Steward.....	125-200
Assistant engineer.....	135
Engineer.....	150-175
Mate.....	150
Unlicensed captain.....	150-225
Combination captain and engineer.....	150-225
Licensed captain.....	150-400

Chained lightning with a sure kick

for

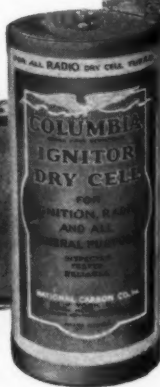
- motor boat ignition
- gas engine ignition
- tractor ignition
- starting Fords
- firing blasts
- doorbells
- buzzers
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Columbia Hot Shot Batteries contain 4, 5 or 6 Columbia Ignitors in series in a neat, water-proof steel case.



FIRE on the first spin and scoot away putt-putt-putt, with never a skip or miss. Columbias are sure-fire ignition.

To be real sea-going, use the Columbia Hot Shot. Four or more long-lived Columbia Cells in a water-proof steel case. Neat as a new skipper. Water-proof as a duck. Convenient to carry and a cinch to connect. It gives your engine greater power.

After a Columbia has delivered fiery sparks all day it picks up new vigor overnight for next day's hard running.

Columbia Dry Batteries are sold by marine supply dealers, electrical, hardware, radio and auto accessory shops, implement dealers, garages, general stores. Insist upon Columbias—Fahnestock Spring Clip Binding Posts on Columbia Ignitor at no extra cost to you.

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The success of MoToR BOATING in achieving far greater circulation and a much larger volume of advertising than any other boating publication is the result of a conscientious effort to produce the best boating magazine that money and brains can produce.

MoToR BOATING is essentially an organization for service—a buying service for the boat owner and prospective owner—a selling service for the marine manufacturer and dealer.

The advertising pages of MoToR BOATING comprise a great market place where the buyer and seller can meet on common ground. Every effort is made to restrict the offerings to thoroughly reliable products.

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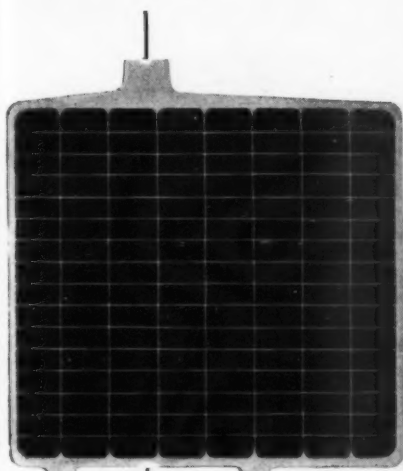
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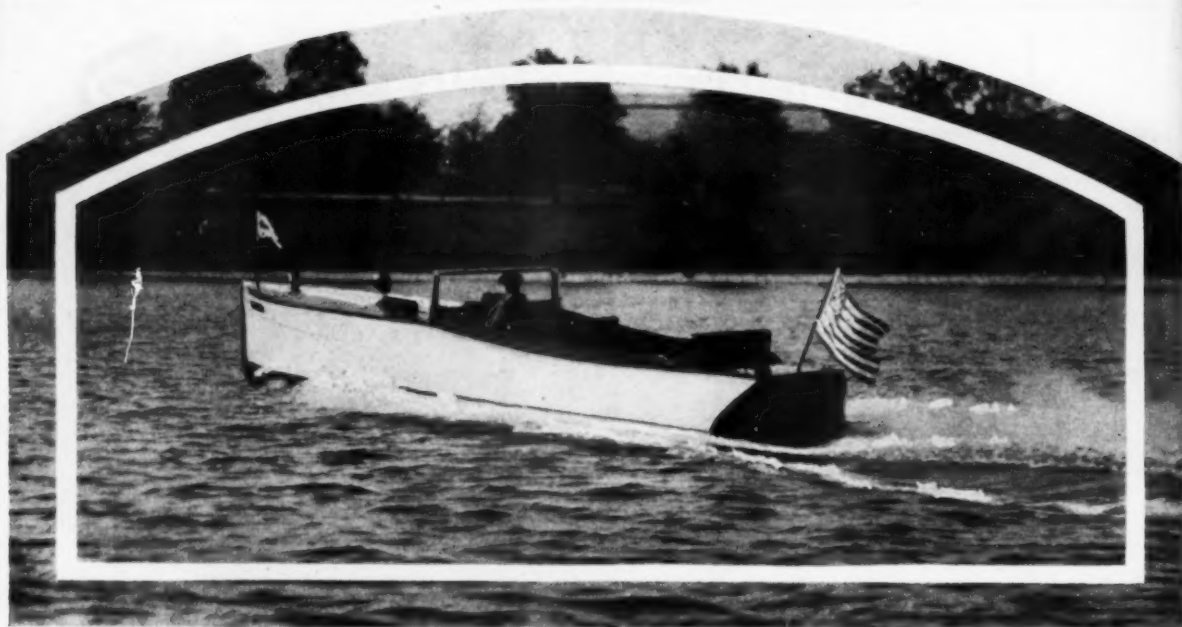
WESTINGHOUSE UNION BATTERY CO.
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WESTINGHOUSE BATTERIES

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will be far more enjoyable if you have a comfortable seaworthy boat, reliably powered and easy to handle under all conditions. While all Fay & Bowen Runabouts answer this description, the thirty footer shown above is especially popular with people who want a big handsome boat with ample passenger space and plenty of speed.

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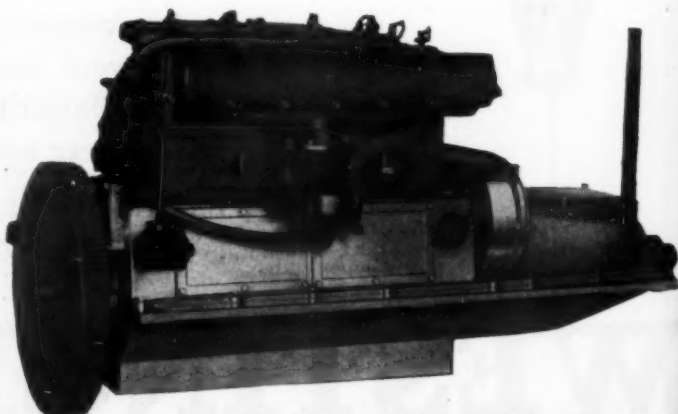
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Mention size if you have a preference.*

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This is the Fay & Bowen LNS-43, used in the 30 ft. runabout. 55 H.P. at 1400 R.P.M. Other models from 7 H.P. up, all four cylinder four cycle engines. Engine catalog sent on request.

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